Synthesis Report:

Impact Study of IDRC Supported Projects in the areas of Social Policy, Public Goods and Quality of Life

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EXECUTIVE SUMMARY

This study examines the types of impacts that IDRC-supported research has had in the area of social policy, public goods and quality of life issues, as a way to deepen understanding of how development research, as an ODA intervention, contributes to social and economic development. It forms part of IDRC's Evaluation Unit's project, "Survey and Assessment of IDRC Completed Projects", which asks the basic question, "What different does development research make?" Other arms of the project examine impacts in the areas of peace and conflict, information and communication technologies, and geographically specific studies in Eastern and Southern Africa. With their different analytical lenses, these studies explore how both the process and outputs of development research make a difference (or fail to make a difference) in building individual and institutional capacity, generating new knowledge, processes, products and ideas, and in contributing to local, regional and national practice and policy. Perhaps more importantly for IDRC programming, these studies also investigate what factors hinder and facilitate the realizing of these impacts.

This study of social policy, public goods and quality of life types of impact explores the following:

- the nature, constraints and apparent benefits of development research in terms of whom the processes and outputs of research projects reach, how and to what effect i.e. with what impact;
- the operational meaning of concepts such outcomes, results, effectiveness, users and impact as they apply within the research context; and
- the ways in which the dimensions and dynamics of research paradigms, project modalities and development contexts serve to influence the realization impact.

This review uses a case-study format to explore issues of reach and impact. A purposive sample of 20 IDRC-supported projects was selected according to the following criteria: age, sector, target users, duration/scope, type of recipient institution, and contextual issues. The projects chosen include ten in Asia, four in West Africa, and six in Latin America. The case studies were conducted by thirteen consultants, eight Southern and five Northern. To ensure comparability of data and analysis, each consultant was provided with a conceptual framework, used similar data collection methodologies, and reported their analysis in similar formats. Consultants were commissioned to use the project experience as a basis to explore the nature and dynamics of reach and impact. While they looked for the anticipated project reach and impacts listed in official project documents, they also explored areas of unanticipated impacts, both positive and negative. As importantly, they also were asked to explore the "why" of reach and impact: what factors influenced the project's ability to expand its reach and impact?

The data used in this study were primarily qualitative. Consultants used project reports and outputs as their starting point, but the majority of their data on reach and impact arose from interviews with project personnel, targeted users and beneficiaries, people in related institutions or fields, government personnel, and those who may or should have been familiar with the project. The data were necessarily subjective, for we examine impact from the perspective of those who are reached by the project and its research.

Section III presents the data gathered in each case study. It describes the projects, details their outputs and relates the case writer's analysis of what reach and impact the project has had and the pertinent factors in each case. The summaries show that the majority of the projects had high or medium degrees of positive impacts in the areas of individual capacity building, new knowledge and raised awareness. These can be seen as first-order levels of impacts of the research process and the use of results. Slightly over half of the projects resulted in building the capacity of the host institutions, while other projects either did not have this as a goal, or failed to achieve it. Changed relationships is the only area in which there were negative impacts identified in the case studies, but there were also cases of highly positive, though unintended, impacts in this area. All the projects aimed to effect changes in practice (improved cropping techniques, better prevention programs in health, etc.), but only half had positive impacts in these areas. Finally, all but one project intended to have policy impacts, but only half were able to do so.

However, the case studies do not approach impact as a "yes/no" question. Impacts are described as tangible and intangible; immediate and incremental; individual, institutional or social; complementary; cumulative; potential; meandering; and ambiguous. The results of our study show that impacts of IDRC-supported research can be described as:

- more likely to appear mundane than profound, found in the details of incremental change rather than in major changes to the whole;
- along a continuum from fairly concrete (reductions in incidence of malaria) to essentially abstract (appreciation of the value in decentralized planning);
- more clearly evident within the parameters of the project than in the wider environment (at least insofar as it was possible to track them);
- most consistent and striking at the level of the individual, alone and in the context of his/her institution or community (rather than in the system or society generally); and
- more significant in their potential for future influence than in immediate changes actually made.

These results imply that, while IDRC projects can and do make a difference, this difference is going to be more often cumulatively complementary than singularly dramatic. They suggest that attempts to trace, identify, measure and display impacts will inevitably be an uncertain and far from simple undertaking. Indeed, some important impacts of development research may be hardy visible or attributable to a project, for they become internalized in peoples' thinking or government policy.

Obviously, reach is the critical condition for impact. Reach refers not only to the number of people "touched" by the research process or its outputs, but also the degree to wich they were affected. Someone who hears about a research project on the news is less significantly reached than one who interacts with its findings in a workshop. The studies show that reach often ripples out from a project and those immediately involved; it can be facilitated by dissemination strategies, with differentiated research outputs for different target groups and amplified or channelled through buffer mechanisms.

Section IV analyses data from across the cases to highlight the factors that influenced reach and impact. These included the following types of factors:

- *contexts*: aspects of the various environments in which the project occurred (physical, socio-cultural, economic, policy, institutional, development, sectoral, and disciplinary) and the push or pull these factors exerted on the project;
- *elements of the project itself*: its design and goals, the logic of its underlying assumptions, the congruence between the research design and its goals or context, the research paradigm, the motivation of key actors, its management, duration;
- *the nature of the innovation and research processes*;
- *intermediary or buffer mechanisms;* and
- *planning for reach, use and impact.*

Factors tend to interact, and produce compound effects in the context of a project. Moreover, a single factor may be critical to the reach and impact of one project, but produce only a negligible effect in another. Thus, we did not weight factors, but consider that while none are irrelevant, certain ones will be of key significance in the specific situation of a research initiative.

This study rejects any "magic bullet" approach to discussing impacts, reach and the factors that influence how and why development research makes a difference. On the basis of the experience of the projects used as case studies, we can conclude that certainly the development research that IDRC supports does make positive differences in the lives of researchers in the South and does contribute to socio-economic development. The case studies also raise several questions that IDRC might consider to help ensure that the research that it supports realizes the widest reach and most positive impacts that it can. Section V raises a number of these for the Centre's consideration.

I. INTRODUCTION: THE MEANING OF IMPACT IN THE CONTEXT OF DEVELOPMENT RESEARCH

A. Introduction

Interest in the impact, effectiveness and use of IDRC research is not new. As a research and knowledge-based organization, a continuing theme of the Centre has been the importance of understanding what it is doing and the kinds of influences it is having on the development agenda and research capacity of developing countries. The purposes of such reflections have been several: to be able to apply improved knowledge about the processes, practices and implications of development research in its own practice; to share its successes with the Canadian public as a way of accounting for the continuing validity of its mandate; to show evidence of the quality and utility of its work toward collaborative and leveraged funding with other private and public agencies. In a broad sense, such goals were also the motivation of this current review.

At the same time, the review sought through a series of on-site case studies of Centre-funded projects, to explore the concept of "impact" itself as a relates to research within a development context: what really is changed as a result a project "being there", in terms of people and their institutions or communities knowing, thinking and behaving differently? How dramatic is it reasonable to expect such changes or impacts to be? From whose perspective, when and according to what criteria of importance should impacts be measured? And, especially critical for IDRC and its future policy and programming, what are the factors which appear to influence the realization of impacts - or the failure to realize them?

This review was limited in that it dealt only with projects which could be grouped loosely under the heading of public good/quality of life and policy, and included only a few examples from each of the regions. That said, the methodology used were case studies, an approach which lends itself, in a fair degree, to depth of data probed. The review also forms part of a wider set of complementary initiatives undertaken by the Evaluation Unit, case studies which have considered commercialisation, information and communication technologies projects; projects concentrated in Southern Africa and the Middle East; and peace and conflict impact assessment projects. Overall, it is hoped at the end of the process to provide the Centre reasonably solid grounds on which to consider the processes and results of its work.

B. Goals and Objectives

The umbrella context of the review was an interest in deepening understanding of how development research, as an ODA intervention, contributes to social and economic development, specifically by considering the ways in which IDRC's own work has had an impact, and perhaps failed to have an impact, on this process. More specifically, the review attempted to explore the following:

a) the nature, constraints and apparent benefits of development research in terms of whom the processes and results of research projects reach, how and to what effect i.e. with what impact;

b) the operational meaning of concepts such outcomes, results, effectiveness, users and impact as they apply within the research context; and

c) the ways in which the dimensions and dynamics of research paradigms, project modalities and development contexts serve to influence the realization impact.

In the end, it seeks to present a synthesis of the kinds of impact IDRC-supported research projects have realized, and the possible implications of this experience to future policy and design decisions, and to the ways in which these activities might be more usefully implemented and assessed.

C. Background

> *IDRC views development as a process for the benefit of people .... a complex matrix of ingredients and problems, none of which are unrelated to others .... (It is) a qualitative exercise more than quantitative. Quality of life and individual human dignity are the goals (PPR-VII:ii)*
>
> *Research is a means, not an end. Building capacity, producing new knowledge and making links are all essential ingredients of the conduct of scientific inquiry. In the context of IDRC's mandate, all these efforts are part of a means to an end -- they are for something...(IDRC, 1986:61)*

In preparation for the review, and as background for the case study researchers, a conceptual framework was prepared, based on some of the experiences and analyses already available in the Centre with respect to the nature of its work and questions around its effectiveness. From this analysis, it was clear that any consideration of impact in the context of the Centre's mandate and programmes is a necessarily complex and, in the broad sense, ambiguous one. At one level, what development is and on whom it should focus are straightforward: to improve the lives of people who are marginalized and living in poverty. At another level, they are less so: who defines and measures improvement, identifies the most appropriate "target" populations, and determines how the problems they face can best be addressed? In other words, who defines "impact", for whom and on what criteria? Is it possible for IDRC's relatively modest levels of intervention to make a difference in such a vast and complicated arena? If so, what kind and for whom?

Concerns about the application and impact of IDRC research are not new, though in the early years, they were perhaps less points of debate. Projects tended to be larger, longer-term and more field-based than they later became. There seemed a clearer notion of research as having an R&D cycle, from investigation through to development product. New crop varieties were produced; even in the social sciences, projects such as "Impact" linked research directly to the testing and production of materials. A number of these projects were also given significant public profile through both IDRC publications and application in operationally-linked systems such as the CGIAR and the education RRAGs.

By the early 1980s, questions of what difference the Centre was making to the lives of the poor in developing countries were becoming more contentious. In 1982, the Auditor General's Report reconfirmed the Centre's role as one of catalyst, adviser, supporter and monitor of projects, but not their manager. At the same time, IDRC itself was beginning to consider how it could best answer the question of whether its work ...*has contributed in some way to social and economic advance* (Using Knowledge for Development:2) The fundamental dilemma: how to ensure that the research supported by the Centre, in both results and their implementation, fostered equitable, sustainable development, while at the same time acknowledging that it was not able - nor did it want - to control the process.

Questions of utilization were raised more energetically in the 1980s, but tended to be answered with the general agreement that the distinction between research and development was reasonably clear; and that the mandate of the Centre was to support research and to strengthen the capacities of developing countries to do it. Action to apply research was seen as the responsibility of those ODA and national organizations with that particular mandate. IDRC's function was, in a more limited way, to collaborate with its research partners to get the messages out.

This apparent consistency of viewpoint might explain the fact that, while considerable thinking was done and knowledge generated about these issues over the decade, there was relatively little follow-up on any of the directions suggested. An S&T survey of Centre-funded researchers found, for example, that though highly rated overall, the lowest score accorded to the input from IDRC POs was on their ability to facilitate links to "*important users of research results*" (Polyani and Amos, 1988:15). This is perhaps not surprising given the perspective on utilization expressed in PPR-X as "*yet another demand on Centre staff*".

It was, however, recognized that the "demand" could be met; that the Centre could experiment with funding activities ... *more likely promote utilization*; ... *to make an unequivocal statement that such activities are a valid and important part of (its) and a programme officer's work ... as important as the development of new projects and the spending of new funds* (IDRC, 1988:3.5.3D); to encourage or seek "connectedness" among projects, to promote emergence of *an increased number of inter-related projects which, taken together, may offer outputs which can be used*(PPR-X:9); to be prepared to make relatively long time commitments to lines of research, implying a utilization agenda with a ...*significantly different structure of financial support* (PPR-X:11); to give more support to NGOs, given their ...*particular problem focus, to be in close touch with their beneficiaries, and to be able to mobilize and combine resources from diverse sources* (PPR-X:2).

Though conceptually sound and in no way revolutionary, these were recommendations not actively or systematically integrated into the Centre's work, resulting in a situation of perhaps mixed messages: a growing policy concern for enabling and assessing impact, but little practical focus on helping staff actually to do either or to encourage their research partners to do so.

In the present period, the distinction between research and application -- specifically in the development context of declining ODA budgets -- no longer sits easily. Current priorities are to take a more hands-on, persistent and facilitative role toward influencing, guiding and in some cases, managing application, a sign of changing policy, if not of mandate definition. Unfortunately, development interventions of any kind are limited in what they can actually do. Projects can hope to promote, facilitate and urge new learning and better action, but ultimately the learning and the

decisions to act differently rest with the people concerned. Even a successful research product, whether idea, process, policy or technology, will have impact only when someone sees the potential, connects it to a need (not necessarily one initially intended) and has the capacity, inclination and resources to use it (also not necessarily in ways intended).

Given this context, it would appear to be especially important now that the Centre be clear about the level at which it expects to, and can, influence and track the impact it has: both as a development research agency; and as a research-knowledge brokering organization -- seeking to be self-sustaining on an increasingly high-profile domestic and international platform.

D. Definitions: Outcomes, Results and Impacts in the Development Research Context

Development Research

An underlying point of the conceptual framework prepared for the review, and emphasized to the case study researchers, were the assumptions that research for development is distinct from general research in its fundamental purpose; and that this purpose should (presumably) be reflected in practice. Intended to do more than simply generate knowledge, projects supported by IDRC - in principle - produce results which engender social, economic or biological change in the service of ending poverty and enabling equity. More than introducing new ideas into policy or social systems, results of development research need somehow to become integrated as part of those systems, a function of social exchange and a part of the society's knowledge fabric. This implies that *how* development research is done, *by whom* and *who has access* to it are as critical as that it is done. The routes of development research are neither straightforward nor predictable, however, making it especially vulnerable as a development tool: it is not easy to know and ensure the "right" answers to these criteria.

A second point underlying the review framework was the further confounding variable of IDRC's activities happening, by definition, in uncertain institutional and policy environments; and often socially and economically unstable ones. The fact that *...outcomes and impact [of IDRC research] depend upon a multitude of factors over many of which the Centre has little or no control* (PPR-VIII:14) is an especially important issue. For the review, these "other factors" were the core i.e. to understand better not just what impacts were and were not realized by the projects, but why.

Factors in this sense are important to the consideration of research impact in two ways. First, they are the conditions which have to be present to create a sufficiently enabling environment for producing and implementing useable results. This includes factors such as leadership, facilitative processes and risk-reducing resources. Secondly, other factors are the conditions in any project situation which will be negative; not always avoidable, but necessarily mitigated. This includes factors such as competing policies, institutional and human incapacity, poor finances, impeding bureaucratic behaviour. These two broad types of factors will facilitate, limit or prevent recognition and/or application of the knowledge or technology produced by the research, irrespective of the professional merits of that research.

Thirdly, the framework suggested that any development intervention has, above all, to be modest in anticipating the degree of change it can effect, and should try to effect, on a national system. Development research interventions, by their nature, are especially limited in their ability to be directly influential because of the nature of both research and its, for the most part, ephemeral products -- ones which are, invariably, at least a few steps removed from the ultimately intended users/beneficiaries. For the majority of countries and institutions with which IDRC works, the "research project" will be a minor part of a complex array of other, often competing, institutional and national agendas. The application of the results of such a project will inevitably, therefore, be neither easy nor straightforward to realize.

Definitions

Even a cursory review of project documents and programme analyses indicates that the Centre's activities have produced a wide range of influences and outcomes. These happen at every stage in the research cycle: as projects are developed (e.g. how research institutions are identified and assessed, for example and the questions asked in focusing the design), during implementation (e.g. what methods are used and how they are applied) and after completion (e.g. how results are formulated, through what dissemination media and to whom). Part of the difficulty the Centre has in talking about what value all of this has been is the mix and uncertainty of the vocabulary used to get at it: outputs, outcomes, results, impacts, reach, effectiveness.

In framing the terms of reference for the case studies, and reporting here the synthesis of their analyses (and recognizing some inevitable "slippage"), an attempt has been made to use the following terminology in the ways described below:

(a) Outcomes are a project's overall influences, intimately linked to factors such as project design, methodology and the nature, amount and timing of resources provided. They are the effects of the project's "being there", both positive and negative, intended and unintended, tangible as products and less tangible as knowledge or skills. Outcomes, in this broad sense, would incorporate the issues of reach and impact.The lifespan and evolution of outcomes are important as well as their immediate expression. Outcomes, in this construct, can be defined from the perspective of both the research and the users.

(b) Outputs are the fairly immediate (though not necessarily short-term) products of a project; again, the tangible "things" and the less tangible "processes" which happen as direct results of a project's activities. They may include people with new skills, awareness and attitudes; a final report documenting the knowledge gained and data collected; a new technology or adapted method. They tend to be defined as the realized goals of a project, but they can happen at points all through the life of a project, as it is implemented, as well as at its conclusion. They are categorised generally as outputs at the institutional, individual, knowledge and practice/product levels.

c) Reach refers to the individuals, groups or institutions "touched" by the project's activities and results in some way. This may include clients, beneficiaries, donors, or other stakeholders. The effect may be negative as well as positive, superficial (information noted) as well as intense (fundamental values put into question) -- determinations of either of these largely the perspective of the one reached. Reach can be intended (targeted) or unintended. The absence of reach is also a factor

influencing impact and so those "missed" should be considered. There are two broad types of people reached insofar as impact is realized:

a) Users - those who consciously interact with any outcomes of the research, who pay attention to, analyze or interpret the information or adopt new ways of doing things as a consequence of being reached by the experience. They are the people who experience and define impact, by deciding to use the product or service.

b) Beneficiaries are users who gain by the products and/or processes of the research activity. All users, then, are not necessarily beneficiaries, where they are somehow disadvantaged by the experience. Some beneficiaries may not be users, where the output of the research is simply "done to" them (immunization campaigns, for example).

(d) Impact is what changes as a result of the project happening; most simply, impact is the answer to the question "what difference did the project make?". Impacts occur when someone engages with an output or process of the research and is influenced by it. Impact, like reach, can only be determined in terms of *on whom* or *for whom*, and whether it is negative or positive, strong or weak. It implies looking at what the project might call outputs, but from the user's point of view.

E. Measurement of Impact

Based on the preceding discussion, it is fairly clear that measuring impact is a subtle process; it requires answering difficult questions with often nebulous - and certainly tendentious - data. Are a policy-maker's expressions of agreement with research results enough to be called an impact, or is actual follow-up action required? If such action fails to occur or if it fails to produce the expected results, can the project still claim to have had impact? Or is it, at this point, the policy-maker's and/or the system's impact which is being assessed? How far along the (likely) various trajectories or "waves"of impact (the idea that there are impacts-of-impacts) does the Centre have to go -- or can it go -- to claim or disclaim impact from its work?

These were the types of questions the case study researchers, and the subsequent synthesis of their work, attempted if not to answer at least to address. At some point, the link between initial research and eventual change will become so diffuse that it must considered peripheral. Research results, perhaps, are more accurately catalysts to development change than facilitators of it; they disappear as other factors intervene to foster, deflect or undo their influence. At some point, therefore, it may be necessary to fall back on an assumption of research, like education, as a public good; a necessary element of the knowledge base of any society in sustaining itself, but to a large degree unmeasurable.

F. Contents Of The Review

This section has attempted to provide something of the thinking which motivated and oriented the review, focussed the cases and, subsequently, drew their analyses together. Because the conceptual framework for the review was, in large measure, based on the experience and thinking of IDRC over the past almost-two decades, it should not be surprising to find that much of the data of the following

sections essentially confirm the issues and conjectures it raised. That said, reconfirmation is a legitimate product of research, and the review has built on case studies of a fairly broad range of project types, contents and contexts; undertaken by a fairly diverse set of researchers. While the conceptual framework provided some general reference points and categories of issues or themes to be looked at -- aimed particularly at avoiding evaluations of the projects rather than analyses of their "impact environments" - it also urged researchers to be open to new, different and even contradictory ideas.

Section II will describe briefly the methodological framework, and limitations, of the review: on what basis the projects and case study researchers were selected; and their terms of reference.

Section III summarizes the substance of each case, as a means of helping situate the subsequent synthesis "in context" as mush as possible. The major details of each project are described, along with the main points of the case analysis -- displaying, in effect, something of the second-level data on which the synthesis has been based. It is in this section that the outputs, reach and impacts of each project are presented.

Section IV attempts to draw generalizations from the cases, concentrating primarily on the factors which influenced reach and impact.

Section V, the conclusion of this review, is actually more appropriately called an ex-post introduction -- an attempt to open up the conversation, rather than to close it down, by inviting readers to consider some possible implications for IDRC from the discussions of Sections III and IV.

II. METHODOLOGY

Using the concept paper written for the review, and in keeping with the methodologies used in other sections of the impact study as a whole, this review was executed in the following phases: project identification, IDRC PO and host institution consultation, consultant identification and contracting, case study implementation, provision of feedback to consultants on reports, synthesis of findings, and review of case studies by pertinent stakeholders.

A. Project and Consultant Identification

Aiming to examine the varied types of impact development research can have in the areas of social policy, public goods and quality of life, we chose a purposive sample of projects across the different areas in which IDRC has worked to serve as case studies. The following criteria were considered in selecting which projects to include:

age: projects completed within the last two to ten years;
sector: health, education, economics, population, agriculture, fisheries, and environment;
focus: policy development, revenue generation, capacity building or institution building, improved practice;
target users: policy makers, knowledge community, practitioners, community members;
duration/scope: varying in size, length, number of phases, and number of partners;
recipient: university or research institution, NGO, operational agency or government ministry; and
context: varying levels of political stability, socio-economic status, and research environment maturity.

After compiling a list of appropriate projects, the coordinators approached IDRC Program Officers (POs) for their feedback as to the utility and feasibility of including those projects as case studies. POs provided further information on the projects, and helped identify some of the key areas to explore in the impact study. Following PO input, we contacted the project's host institution, advising the project leader(s) of our intention to review their project as part of this study, asking whether that would be possible, and requesting their cooperation in the study.

Table 1 provides some of the details of the twenty projects included in this review.[1]

Project POs, Regional Office POs, and other IDRC contacts were asked to help identify consultants to undertake each case study. We tried to find consultants local to the region in which the project took place, hoping that they would bring a good understanding of the social, political, economic and/or research contexts in which the project took place, to minimize international travel costs, and to get a broader set of perspectives in the analysis of impact. The people chosen included university professors and independent consultants. Eleven of the thirteen authors of the case studies had previous experience with IDRC.

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[1] Originally, we intended to include 21 projects in the review, including the Social Policy Network in West and Central Africa, but this case study was not completed.

Table 1. Projects Included in Social Policy & Public Goods Impact Study

Proj #	Title	Country	Budget	Host Institution	Sector
South East Asia					
830227	Three Strata Forage, Phase I	Indonesia	246000	Udayana State U	Agriculture
900263	Three Strata Forage, Phase II	Indonesia	83410	Udayana State University	Agriculture
810241	Provincial Education Planning	Thailand	53200	Thailand. Office of the National Education Commission	Education
910074	Sustainable Land and Forest Management	Philippines	231264	University of the Philippines, College at Baguio, Cordillera Studies Centre	Environment, Policy
910231	Participatory Extension	Thailand	109850	Thailand. Ministry of Agriculture and Cooperatives	Agriculture
928016	Food Security and Nutrition Analysis	Laos	147640	Council of Medical Science	Nutrition
948005	Health Research Capacity Building	Cambodia	136650	Cambodia. Ministry of Health/Chulalongkorn University, College of Public Health	Health
South Asia					
820191	Inland Fisheries (Nepal)	Nepal	351600	Nepal. Ministry of Agriculture, Fisheries Division	Fisheries
870053	Informal Sector Street Food (Pune)	India	38440	Centre of Studies in Social Science	Economics/Nutrition
938300	Resource Costs for Under Nutrition and Morbidity	India	129060	Centre for Multi-Disciplinary Development Research (CMDR)	Economic Policy
West Africa					
840324	Means of Information for Rural Development - Phase I	Cameroon	137840	INADES-Formation, Cameroon	Information
880140	Means of Information for Rural Development - Phase II	Cameroon	248350	INADES-Formation, Cameroon	Information
910190	Communication & Information Aimed at the Rural People of Cameroon Ph III	Cameroon	173150	INADES-Formation, Cameroon	Information
921052	Impregnated Bed-Nets and Community Prevention of Malaria	Benin	222900	McGill University	Health
Latin America					
870313	Representative Institutions & Puhlic Policy	Argentina	82720	Centro Latinoamericano para el Analisis de la Democracia (CLADE)	Puhlic Policy
871053	Organizations of Community Participation in Central America and Caribbean	Cuba	49740	Centro de Estudios sobre América	Policy (local)
890059	The Housing Problem and Community Participation in Costa Rica	Costa Rica	28068	Centro de Estudios para la Acción Social (CEPAS)	Housing
901012	Toward a Sustainahle Development Strategy for the Sierra de Santa Marta I	Mexico	254684	Carleton University/Centro de Estudios Agrarios	Environment/Policy
920010	Toward a Sustainahle Development Strategy for the Sierra de Santa Marta II	Mexico	332387	Carleton University/National Autonomous University of Mexico	Environment/Policy
921050	Social and biological impact of piped water	Guatemala	207635	INCAP/ McGill University	Nat. Resource Mngmt

B. Case Study Implementation

The case studies were implemented with a similar framework, to ensure comparability of data and analysis. Case writers were provided with the concept paper (Bernard and Sander 1997) to introduce the scope and objectives of the study, and to help guide their thinking and analysis of reach and impact. The coordinators also followed-up with email, phone, and/or personal conversations, to try to ensure each consultant understood the approach being taken. Consultants were provided with an annotated case study report outline, and a table of questions which related all aspects of the analysis to issues of reach and impact. (See Annex 1 and 2 for a copy of these materials.)

The case studies were assumed to take between ten and fifteen days' professional time, of which approximately two would be spent reviewing project documents, five to seven days were expected to be spent in the field, and the rest in writing up the report. Consultants interviewed project personnel, those immediately affiliated - users and other stakeholders, and those who may have been reasonably expected to have heard of its findings. The data gathered were primarily qualitative, and consultants had to grapple with the subjectivity of what interviewees said about the project's impacts and why those impacts were or were not realized.

Consultants were reminded that they were not being commissioned to evaluate the projects so much as to use the project as a case from which to explore the nature and dynamics of impacts of development research. They were asked to look for any impact that the project may have had, not just the ones that were intended, or were anticipated in the project's initial proposal. As stated in their terms of reference, they were to: "document and analyse the outputs, reach and impacts of the Centre-supported project... and identify factors in the context, design and implementation of these projects which have influenced the types of impacts realized and facilitated or impeded their range and quality." Specifically, the consultants were mandated with the following objectives for their case studies:

- to document and analyse the outputs, reach and impact of Centre projects which have aimed at public goods/quality of life and policy development results;
- to identify factors in the context, design and implementation of these projects which have influenced the types of impacts realized and facilitated or impeded their range and quality;
- to synthesize across the cases generalizable characteristics of the impacts of IDRC-supported research activities and factors which influenced them; and
- from this synthesis, to generate recommendations for improving the development and management of research projects toward realizing more and better impacts more effectively.

The study of the Participation and Public Policy (PPP) set of projects was done slightly differently from the rest. A former IDRC Program Officer responsible for the PPP program took responsibility for this study, and, in conjunction with the coordinators, drew up a questionnaire for former project personnel to answer to draw out the reach and impacts of the three projects included in the set. The project personnel were commissioned to interview relevant stakeholders and users, and the former PO was responsible for compiling and analysing the data to explore issues of reach and impact on the program level. Due to its different nature fro the rest of the case studies, this report has not been incorporated into this synthesis, but remains available from the Evaluation Unit as a separate piece.

After a round of comments and edits on their first drafts, the consultants submitted final drafts of their reports to the coordinators and the Evaluation Unit. These reports were used as the basis of this synthesis report, and distributed to key informants from the case studies for their review.

C. Comments on the Methodology

As coordinators, we found that the initial processes of securing the relevant approvals for selecting the case study projects, as well as finding and contracting consultants overseas was quite time-consuming. A couple of case studies were rushed in getting started because of delays in these processes. On the other hand, the time spent on reviewing the first drafts of the case studies could perhaps have been abridged.

A number of the consultants provided feedback on the methodology of this study. The time allotted appears to have been too short; a number of consultants reported that they should have had more time in the field to interview more of the stakeholders. One consultant also requested more time for writing the final report. The quality, length and detail of other reports suggest that other authors also spent more than the budgetted 15 days on this process. Two of the cases suggested problems of language capacity in not being able to reach a winder range of interviewees.

The Concept Paper was criticized as needing further explanation of certain terms and concepts and eliminating ambiguity and redundance (this was not further explained). The concept paper should have been translated into French and Spanish to facilitate communication of our approach to consultants.

Nine out of the sixteen initiatives[2] included as case studies were explored between two and five years of their completion date. The issue of when to do an impact study remains highly context-specific. In the cases of projects which were completed within the last two years, the study findings suggested that many of the projects' impacts are still nascent, and the situation should be revisited in another few years to get a better sense of what difference the project has made. However, there is also a dilemma in waiting too long for an impact study, for in The Thai education decentralization project, completed twelve years ago, some of the key people involved in it had difficulty remembering the research.

This study was designed to meet the information needs of IDRC and its Evaluation Unit. Within IDRC, appropriate program officers and regional office directors were informed and a few were involved in the study's planning and execution. However, the study allowed little flexibility to negotiate with IDRC's partner institutions to see if and how the case studies could be tailored to suit their needs as well.[3] IDRC Ottawa chose the projects to be included, the consultants who would

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[2] As seen in Table 1, a couple of projects had multiple phases.

[3] Project leaders and host institutions were asked to contribute substantial amounts of time to the study, to meet with consultants, provide essential information, assist them to identify appropriate interviewees, and provide logistical advice. This was essential for the successful completion of the cases.

used. This makes a coherent and methodologically sound study, and provides useful outputs for IDRC, but leaves little room for input from the host institutions. In future impact studies, IDRC could try to take a more participatory approach with Southern partners, and develop studies that aim to be mutually beneficial.

III. DETAILS OF THE CASES: DISPLAYING THE DATA

This section relates the substance of each case study written under this review. Each project reviewed is described and its main outputs listed. The cases are presented in geographic order, from Latin America, Africa to Asia. This section highlights the case writer's analysis of the reach and impacts that each project has had, and the factors that influenced these, both positively and negatively. This section, then, provides the basic data from which the analysis of factors is carried "across" the cases in Section IV.

A. *Social and Biological Impacts of Piped Water, Guatemala* (92-1050) Silvio Gomez

Project Description. This project evaluated the social and biological impacts of piped water by comparing the time and energy saved in collecting piped water versus unpiped, as well as the health and nutrition benefits of piped water. The results were to be used to promote health and nutrition interventions. An interdisciplinary team (epidemiologist, anthropologist and public health researcher) coordinated the project which attempted to encourage local use of piped water and examine the labour/time use patterns of women in those communities. They documented attitudes toward water, the activities of the local water committee, how water is used, and the perceived effort and duration of specific activities. They also compared the energy expenditure, time usage, and health and nutrition of women and children from communities with piped versus non-piped water. In addition to surveys, questionnaires, focus groups, and structured observation, the project used a double-labelled water and heart rate monitoring techniques to monitor energy expenditure.

Outputs. The major output of the research was new knowledge about the positive impacts of piped water as a specific development intervention. Some findings were particularly interesting for their potential implication for the introduction of piped water into communities in Guatemala: e.g., the project found that women did not mention health as an important motivation to having piped water. Methodologically, the study found that heart rate monitoring was just as reliable as the more expensive and technical double-labelled water for monitoring energy expenditures. As products, the project produced two reports. The first was the final technical report, available only in English, which was sent around to development agencies and participants in the final workshop. The second was an article by two of the principal investigators which has not yet been sent for publication. Finally, eight field workers were trained in structured observation techniques (wherein observers spot-checked women's activities every ten minutes).

Analysis: Reach and Impact. During its design, project leaders identified international donors (UNICEF, USAID, CARE) and government institutions (including the Ministry of Health) who could be possible users of the study's findings. The group provided input into the project proposal, and while they did not participate in its implementation, they were among the 27 people who attended the final workshop. On the broader scale, however, only two research reports were produced, and these have had a very narrow dissemination.

According to the case writer, the project has had an impact on incorporating health and gender components into rural water programs. USAID has incorporated health as a component in their rural water programs upon the suggestion of a principal investigator; UNICEF began to promote women's participation in water programs and to include them as important for maintaining family health; and CARE began to train women as health promoters. A UNICEF official reported that the study was used in the development of a new Social Alliance program in Guatemala, which included promoting water systems projects. In some of these examples, it was the personal attention of one of the principal investigators and his high profile that led to the study results being brought to bear on the new program.

The case study did not reveal any impacts on the community women who contributed to the data collection part of the study.

High Quality Research and Host Institution. A positive factor contributing to the impact of this project was the high quality of the research. It addressed a priority problem in Guatemala, and was attended to by a highly qualified research team. Moreover, the research institution was credible, and could assemble the interest group of international donors and government agencies.

Final Workshop and Transient Donors. The final workshop was geared to impact. After an initial presentation of the study's findings, three work groups broke off to discuss the implications of the findings, dealing with intersectoral and interagency views, and came up with a paradigm to proceed with intersectoral work. However, the case writer found that many of the individuals who attended the workshop had since left their organization, taking with them memory of the project. Thus, impact was hindered in this case by the lack of organizational memory or institutional learning stemming from the workshop.

Conclusion. The case study of the impacts of this project was surprising, for it suggested that the main impact was the growing emphasis of the positive impacts of piped water on health, even though the research found no such link. The case author claims that in this case, it was the research process that produced this impact, not necessarily the specific results of the research. He goes on to argue that the path between social science research and its impact is not unilinear:

> We can not look at the impact as the end of a linear unicausal, successive process: research results, dissemination, utilization, specific, measurable impact. Real life is not like that. The project's products are there in society. Many factors make it possible for the results to meet the right users at the right time. Very seldom in science, and less in social sciences, the process is simple. We have many examples in the physical and biological sciences showing wide gaps between research, social appropriation and successful utilization. (Gomez:10)

This study also emphasized the importance of individual people in issues of impact: the individual appropriation of ideas, individuals bringing new ideas into institutions (in this case, the project leader's personal reputation), and the problem of individuals taking with them memory of a project when they leave an organization.

B. *Toward a Sustainable Development Strategy for the Sierra de Santa Marta, Mexico* (90-1012 and 92-0010) Tricia Wind and Andres Sanchez

Project description. This project blended participatory, action and scientific research in understanding and finding ways to improve livelihoods of indigenous people living in a biological reserve in Mexico, while also contributing to government policies to promote sustainable human development in the region. The research integrated several disciplinary perspectives, and was made up of a flexible team structure. The project had several sub-components of research, experimentation, outreach and policy work, covering issues of soil erosion and fertility, crop diversification, community organization, women's empowerment, non-timber forest products, and cultural contributions to understanding sustainable development.

Outputs. The project identified and developed several "technologies" on the local level to improve peoples' livelihoods and the sustainable development of the Sierra. These included identifying appropriate leguminous plants to interplant with corn to reduce erosion and increase soil fertility, identifying species and experimenting with the cultivation of ornamental palms, promoting vegetable gardening through women's groups, and finding ways to control and prevent forest fires.

On a meso-level the project developed local groups which carried out the dissemination of cropping techniques and could follow-up on alternative production strategies: a network of peasant promoters (extension workers), palm- and vanilla-producer groups, women's groups and local ecological committees. The groups developed capacities to undertake their own research and experimentation in productive activities and environmental conservation. Moreover, the project team became an NGO that was able to carry on the work initiated in phases I and II, establishing a positive reputation within the communities of the Sierra, among donors and in government circles.

On the macro-level, the project was able to contribute to resource management planning for the Sierra in government ministries at the state and federal levels.

Analysis: Reach and Impact. The various micro-level innovations of the project reached throughout the communities of the Sierra de Santa Marta. Reach rippled out from the project personnel to the network of peasant promoters, women's or producer groups, to other community members. Through exchanges among peasant extension workers and conferences for project personnel, reach extended to other peasant communities throughout Mexico.

Within the Sierra, the project contributed to decreasing levels of soil erosion, increased production of corn and other food crops, which leads to improved nutrition for families. It is reasonable to expect that once certain products mature (e.g., palm and vanilla), *campesino* and coffee growers' incomes will increase in amount and stability. The emphasis on forest and crop preservation supports local biodiversity. In all of the project's micro-level activities, they benefit not only the local populations, but they also serve as concrete models of sustainable development, in which human livelihoods are achieved in greater harmony with the local environment.

Through publications, participation at conferences and relations with other NGOs, the project was able to raise awareness about the whole of the Sierra de Santa Marta to the general public in Mexico. This raised profile eventually led it to becoming on of 20 regions in Mexico designated by the federal Ministry of the Environment as an example of regional sustainable development. The project team was able to develop good working relations with policy makers, both in the state ministry of forestry, but also in the federal ministry of the environment. It is currently contributing to three resource management planning and sustainable development initiatives for the Sierra through the ministry of the environment.

High Quality Research. One of the factors which ensured so many positive impacts in this project was the solid research base that the project developed prior to and throughout the first phase of this project. The principal researchers had worked in the Sierra for many years before they designed the first phase, which helped to ensure that their approach and questions were relevant and appropriate. They had a strong anthropological basis and had already developed good relations with the people of the area.

Participation. The project was genuinely participatory. The team's approach to community work was to take a long time to listen to people, helping them diagnose their own situation, and formulate their own proposals for change. The team took seriously the suggestions and proposals of the local groups that it was helping support, and advocated for these groups to government officers and funders. Government officials recognized the good relationship that the NGO has with the local people, which increased its legitimacy in the eyes of those outside the Sierra.

Intermediary Agencies. The meso-level outputs of the project were key factors to its ongoing reach and impact. The network of peasant promoters served as living proof of the innovations that the project tried to promote. Along with the commodity-specific producer groups, they experimented on their own plots with different techniques and species, and exhibited a very high degree of ownership of the research and its results. Moreover, they lived in the region, and served as local examples of alternatives that both improved production and conserved the environment. As an NGO, the project was able to sustain the impacts that it began to have by the end of the second phase of IDRC funding. It was able to maintain the relationships with people in the Sierra that were key to the participatory nature of the research, and deepen relations with policy makers, also important to ensuring impact on the macro level.

Crossing Intra-Community Divisions. The groups of producers and promoters included members of different political, religious and ethnic backgrounds, which meant they could communicate effectively to the different groups in the Sierra. Moreover, organizing as producers avoided the partisan nature of so many other groups in the Sierra, which worked on precisely those lines that divide communities.

Nature of the Innovations. The nature of the innovations made them attractive to people in the Sierra. The green manure program had quick and dramatic results in improving moisture retention in soil, improving fertility and decreasing erosion. The non-timber forest product cultivation diversified and potentially stabilized peoples' income sources. The project ensured adequate follow-

up support through its own extension work, plus that of the peasant promoters; it also worked to ensure products had good access to markets, and that people were being paid. The project was also strategic in facilitating dispute resolution between communities, and helping people find practical solutions to poverty and environmental degradation, especially after they were instrumental in stopping a eucalyptus plantation from moving into the area on environmental grounds.

Perceived Risk. However, other factors regarding the nature of the innovations proposed hampered impact. Some of these had to do with perceived risk of adopting the innovation (e.g., in the case of the green manures, there was a perceived risk of increased problems with rodents and snakes in ones corn plot. Even while there was no evidence that this was the case, the perceived risk was enough to stop some people from adopting the innovation).

Multiple Activities. The project was multi-faceted, working on many levels and many initiatives at once. This was generally a positive factor, ensuring that project personnel had a good knowledge of the many aspects that sustain sustainable development (biophysical, ecological, cultural, economic, political and social), and helped them shape an integrated analysis as a basis for policy recommendations. However, it had the drawback of perhaps spreading the project team too thin, which could be seen in one of their commodity options (vanilla production) failing to have any positive impacts due to lack of adequate research, monitoring and follow-up.

Individuals. Individual members of the project team were able to "champion" the research in academic and political circles, on the basis of their personal reputation.

Conclusion. This project is a fine example of participatory action research being combined with academic research to the benefit of both community-level and national-level stakeholders. It is particularly interesting as an example of how meso-level outputs like community-level groups can served both to increase reach and enhance impact, for they serve as "buffers" between the research and the user, translating and adapting research results to fit local conditions. As well, it is an example of a research project taking on a life of its own as team members had since formed an NGO to carry on the research they began under IDRC funding. The quality of the work begun, their good working relationship with people in the Sierra and links with policy officials have brought the NGO other funding from Mexican authorities and other international donors, including the Rockefeller Foundation, the Inter-American Foundation, and the Global Environmental Facility.

C. *Project moustiquaires imprégnées et le contrôle communautaire du paludism au Bénin* (92-1052) Yawo Assigbley

Project Description. This project was one of a number of field tests of the anti-malarial impregnated bednets that IDRC helped to develop in the 1980s. It began with an entomological survey of malaria in Bénin and an ethno-medical study of local perceptions of the disease. Using action-research and community involvement in the testing and distribution of the bednets, the project intended to reach community members in Savalou in order to decrease the prevalence of malaria. A Beninese NGO, Organisation savaloise pour la solidarité et le developpement, and NYONA, a local women's health

cooperative, were linked with researchers from the Centre des maladies tropicales at McGill University in Montréal. The local NGOs orchestrated an awareness campaign to promote bednet use, managed a production unit to make the nets, and helped with the research. In addition, local committees for coordination, surveys, marketing, ethics and follow-up were established. The interdisciplinary research team used several different methodologies, including family-level surveys, focus groups, weekly follow-up to monitor and support bednet use, and theatre, posters, T-shirts and other innovative methods for local dissemination.

Outputs. Research products included studies on the entomology, local knowledge, attitude and behaviour with respect to malaria; determinants of bednet access, its acceptability and use; and the costs of prevention and treatment of malaria. These led to three articles being published about the project, with four others awaiting publication. The studies were also shared with the marketing and research committees, officials from the Ministry of Health, and research institutions, including the national university.

The production unit was established and made 2000 bednets by the end of the project which were distributed throughout the region of Savalou.

People were trained in management and marketing, survey techniques, bednet manufacture and reimpregnation, and as members of the various committees that were responsible for different aspects of the project.

Analysis: Reach and Impact. The project reached many communities in Savalou, increasing their awareness about the prevention of malaria and promoting bednet use. With its participatory methodology, the project reached 17% of the population, including 80 people from local organizations. It also reached the personnel who were involved in it, including with members of the committees that were set up for the project. Nationally, the project reached throughout Benin via radio and television programs, as well as through programs through UNICEF and the Ministry of Health. On the health system, the bednets have been adopted as an essential means of combatting malaria in the national 5 year plan against the disease. Through international conferences sponsored by other donors and visits to the Savalou site, other international organizations and national NGOs witnessed and took up the innovation, and it has spread to other countries in Africa.

Community-level: Community members identified the following as the impacts of the bednets project: a better knowledge of malaria, its causes and ways of combatting it;

- increased pride for having collaborated with the research team;
- a valorization of women for being able to express themselves freely in front of their husbands in meetings;
- the involvement of city and village officials in raising awareness;
- decrease in the incidence of malaria, and therefore a significant improvement in health;
- deeper sleep at night, meaning people can work better throughout the day. This has translated into being able to cultivate larger areas of land, increasing family revenues in cotton sales, and growing more food; and
- decrease in medical expenses, meaning families are better able to afford school fees for their

children or pay for traditional ceremonies and funerals.

Unintended impacts included people keeping their bedrooms neater, because health workers would come by often to see how the bednets were working; a decrease in the number of other household insects who were killed by the chemical in the bednets; and a cleanup of mosquito habitat around town.

Participation. Many of these impacts appeared to have occurred due to the participatory action-research methodology pursued by the project, and its strong and creative dissemination methods. Community participation in choosing and helping to adapt the design and size of the bednets was one of many aspects that helped ensure the popular uptake of the innovation.

Problems of Supply. Bednet uptake was hampered by the lack of availability. The local production unit could not keep up with demand for the bednets as it faced logistical difficulties, especially with keeping enough stock and maintaining the chemical reimpregnation service. The inputs to bednet production are not local, and the manufacturers have difficulty importing appropriate amounts, dealing with currency fluctuations insufficient capital, and conflicts between OSSD and NYONA. Moreover, even with a subsidy, the high price of the bednets proved a barrier to many local people. Undaunted by the difficulties experienced in Savalou, other NGOs have patterned other production units in Bénin, based on this project's experience.

Capacity-Building and North-South Relations. For the Canadian counterparts, impacts mainly surrounded improved knowledge of African village conditions, community health development, and impregnated bednets, though they also cited having increased visibility in the scientific world about tropical diseases. Capacity-building impacts were fairly limited for the Béninois team, especially, as they argue, because the Canadian researchers refused to surrender any control of the research. The Bénin personnel felt subordinated as research assistants throughout the project, with Canadians limiting their ability to innovate or develop. There is evidence for this, including the fact that the Canadian researchers sold the project's computer at the end of IDRC funding. This lack of local research capacity development may have stifled the potential for future impacts in local health research by this group.

In spite of a lack of impact in building research capacity, the project helped the OSSD gain credibility and visibility, as well as skills in group dynamics, marketing and management, participatory research techniques. For NYONA, the project meant increased social valorization for them as women and for their activities, feelings of greater autonomy, self-respect and respect of their spouses and families; increased revenue for their families; better health since they too were using the bednets; and an increased confidence to speak, discuss and negotiate with men, institutions and all types of officials.

Benin health system: A nurse in the regional hospital attested to there being fewer cases of malaria since the bednets project. However, the nurse maintained that the project could have broadened its impacts if it had done more to engage the local health system. On the national level, other international agencies took up more research and promotion of the bednets in other areas, and the national government highlighted the effects of bednets in its 5 year plant to combat malaria.

International: Given constraints on time and budget, the case writer was not able to follow-up on international impacts of this project. What was clear was that international visitors learned of the project's success at international seminars, donor conferences and site visits in Savalou, and that the bednets were going to be tried in Togo, Niger and Burkina Faso.

Conclusion: This was more of an implementation-focussed project, and thus had more tangible impacts than other cases in this review. As such, it suggests some key conclusions about how to support the implementation of a research innovation. In this case, community involvement was key, since the innovation was aimed toward popular use. As well, the implementation was combined with research to understand the specific context of the local transmission, dynamics and perceptions of malaria, which helped to ensure that dissemination efforts were appropriate. Conflicts among actors hampered the project's smooth implementation, and may have stymied opportunities for the Bénin organizations to develop their research capacity. Yet despite the conflicts, the project brought a number of positive impacts for the Benin NGOs, including increased confidence and respect for women. There were also many opportunities to spread the reach of the innovation through donor-supported conferences and visits.

D. *Project communication en faveur du monde rural au Cameroun* (91-0190) Yawo Assigbley

Project Description. This project was the third phase of IDRC funding for the activities of INADES-Formation Cameroun (IFC) in providing information on agriculture, credit, the environment and other issues of rural development to rural people in five of Cameroon's ten provinces. Previous phases had aimed to help young farmers remain in their villages, improve conditions of life through exchange programs between peasant farmers, and diversify IFC's information and training resources for these programs. This third phase was intended to consolidate and diversify means of communication and information exchange between rural people and development experts, as well as among rural people themselves. Specifically, it sought to train a librarian to manage and improve the national office's library, publish two regular journals, develop radio programs in French and English as well as in local languages, and organize exchange trips between peasants. The project focused more on information distribution than on undertaking extensive research activities.

Outputs. The project broadcasted 66 radio shows, published 16 issues of its *Rural Development Review* and *Courrier des abonnés*, and organized 5 exchange visits between 1991and 1993. These outputs fell only slightly short of the originally planned targets. In addition, there were some minor improvements to the IFC libraries and its personnel, but these were still judged to be disorganized and under-utilized.

Analysis: Reach and Impact. The project reached numerous communities of people through its radio programs and publications. Fewer people were involved with the exchange visits, but the participants were reached more profoundly than those who only listened to the radio broadcasts. Few people used the IFC libraries, so reach was not furthered significantly by those activities. Beyond the

rural people, the project's reach extended to other INADES-Formation offices throughout West Africa through the IF newsletter, which spread ideas about the exchange visits.

The impacts of this project were mainly for those peasants who heard the radio shows, read the periodicals, or were involved with the exchange visits, as well as for IFC staff directly involved in the project. The exchange visits seemed to be the most useful, leading to significant impacts in increasing women's production of manioc and palm oil by 25% and men's corn production by 50%. For one remote community in particular, the exchange visit to another village helped people see new possibilities for alternative crops and techniques that they have since implemented. The radio programs were less useful, and people complained that they needed more follow-up from IFC extension workers to be able to implement the ideas that were only explained verbally. More profoundly, perhaps, the project allowed rural people to change their attitudes about information and communications media. The case writer argues that in Cameroun, information is often seen as being reserved for the intellectual, privileged class. Through the activities and outputs of the project, rural people came to see radio and published information as useful to them, and not just vehicles for amusement, political propaganda, and exchange visits as something more than just for political paybacks for local dignitaries.

For IFC staff, their involvement in the project activities helped them gain skills in publishing, writing, editting, and producing radio shows. Some of the project personnel went on to start new NGOs and work on different publications with similar activities and themes as the IFC project.

For IFC itself, the project helped it formalize its approach to information and communication, increase its capacity to provide information to rural people, become better-known among its target audience, and better understand the information needs of rural people.

Context. There were a number of factors which inhibited the impacts of this project. The first pervasive factor was the economic and socio-political crisis that was happening during the implementation of this phase. Peoples' purchasing power had dropped to almost 0, and political upheaval and violence made working in rural Cameroun very difficult. The project had no possibility for policy impacts during this time, for the government had ceased all of its activities in agriculture and commercialization because of the crisis.

Participation. The radio programs were supposed to be designed in consultation with a committee of IFC trainers, development workers, journalists, economists, other ONGs and peasants. However, these did not function throughout the project, so the programs were designed without input from appropriate bodies. Without this input, the programs lacked relevance to the immediate information needs of the people it was intended to serve. The same problem arose with the editorial boards that were supposed to contribute to the periodicals.

Characteristics of the Output. Subscription rates to the two printed publications was very low. This was because they were too expensive for the rural population (especially in that time of economic crisis), inappropriate for a primarily illiterate population, and not easily accessible in most of the rural areas. Some respondents complained that the radio shows were on at inconvenient hours, especially

for women listeners, and that many people lacked access to a radio.

Personnel. A key difficulty for the project was that three of the four key people involved in the project, including the national director of IFC, left during the implementation of this phase.

Conclusion. This project seemed to have a number of positive impacts both for rural people in the Cameroun, personnel of the IFC, as well as for the institution itself. However, these impacts were hindered by the context of economic and socio-political crisis that crippled the Cameroon in the years of the project's activities. Yet, there were other hindering factors that the project could have mitigated against; these included the lack of peasant participation in the issue identification and design of IFC publications and radio shows, the inaccessibility of its outputs, and the lack of follow-up by extension workers to help people implement the ideas discussed on either the radio or in the publications. Finally, while rural people reportedly used libraries of other organizations, the disorganized and under-staffed libraries of IFC were underutilized.

E. *Informal Sector Street Food, India* (87-0053) Manjul Bajaj

Project Description. IDRC supported this small ($38k) research project into informal sector street food production in Pune, India between 1988 and 1990. Its purpose was to describe the activities, characteristics, and operations of street food vendors in the city, the policy environment in which they worked, and to recommend policy changes for municipal officials. Researchers took a census of vendors, interviewed them on their socio-economic profile and operations, and performed microbiological tests on food samples. Food vendors were involved in each aspect of the research, and, along with municipal officials, were invited to a final dissemination workshop which focussed on health and hygiene of vendors food, and provided information on government regulations and loan opportunities pertaining to their businesses. While vendors were involved throughout the study, researchers failed to incorporate other key stakeholders, including municipal authorities and local NGOs. Moreover, the study brought together a lot of information, including licensing requirements for vendors, but it did not formulate the findings into specific policy recommendations or suggestions for action, leaving off instead at the level of general guidelines.

Outputs. The project produced a good quality publication called "Street Food Vending in Pune". One hundred vendors received training on hygiene and better vending practices through two workshops, but these were not originally foreseen in the proposal to IDRC, and so were financed by CSSS resources. Finally, two of the researchers who worked on the project developed a new type of pushcart for more hygienic and practical food vending.

Analysis: Reach and Impact. The reach and impact of this project were quite limited. Those reached by the project were the vendors, a few municipal officials and a couple of other institutions who received a copy of the final report.

Knowledge created through the project had the following types of impacts: the microbiologist has used the research results in her university lectures. A consultant to the project told school children

in a neighbouring township about the study, and a couple of the students undertook a similar study in their region. A pickle manufacturer heard about the study results, and looked into the commercial feasibility of manufacturing the food at a central, hygienic facility, and distributing it to street vendors. With CSSS' help, the manufacturer discussed the idea with vendors, and they prepared a proposal to have the idea funded. The proposal was not accepted, but the manufacturer has not ruled out the possibility of trying this again in the future.

Vendors could have been the principal beneficiaries of the research, and those who went to the workshops were enthusiastic to learn about the microbiological aspect of the study. They also remembered the practices suggested to improve the hygiene of their operations, but the vendors interviewed for the case study argued that they could not put these into practice because they lacked the infrastructure to do so, and were too busy with survival and dealing with the insecurity of their position.

The researcher who undertook the survey of the hawkers credited the project with helping him develop field research skills, for he had to be very tactful and build rapport with the vendors in order to gather socio-economic data about them. He has used these field skills in subsequent people-centred research projects.

As for the improved cart, the researchers were not able to push it further than getting vendor feedback on the design phase. They approached the Rotary Club to build a few demonstration models, but received no funding. IDRC was not approached about funding this product.

Context. The project objectives state that it was aiming to develop policy recommendations to address the interests of food vendors and consumers. However, it seems that the project had almost no impact on policy makers. Municipal officials were not included in the implementation of the research, and some were hesitant even to accept a copy of the final report. While some officials attended the final workshop on food hygiene, it was unclear that the project made any actual policy recommendations. Food vending was part of the informal sector and relations between vendors, planners and the police were generally tense at best; this project had difficulties finding its space to address the various actors.

Several factors which negatively affected the project's ability to expand its reach and impact were: the disconnected character of the host institution, ambiguity about who would be the users of the research, conflict among the different stakeholders in this issue, and faltering IDRC attention.

Nature of the Host Institution. The project was not well-placed either within an ongoing policy debate or among the key stakeholders in the food vending issue. The principal investigator developed the project at the request of an IDRC programme officer, and only joined the CSSS for this project. The CSSS itself was a loosely-affiliated organization, through which researchers from different institutions worked together on common issues. Thus, there was neither institutional momentum to carry the project on after its completion, and little opportunity to incorporate its findings into other studies. One element of the research findings that did linger was the awareness that water handling was a key public health concern; this element has been incorporated into other CSSS activities.

Because the principal researcher had only a passing affiliation with CSSS, the research experience did not appear to serve toward institutional capacity building either.

Moreover, the CSSS had no alliances or mandate from any of the stakeholders in the food vending issue, and so was not in a position to move the research into policy debates or represent anyone's interest (though it seemed to be more sympathetic to the vendors). "The study was unable to decide upon an appropriate communication strategy and simply down played some of its important results for fear of harming the interests of one group versus another (e.g. hawkers versus consumers, hawkers versus municipal authorities)" (Bajaj-Pune: 6). The CSSS may have been able to catalyse discussion among the stakeholders, but only the vendors were involved throughout the project, leaving the CSSS in no position to serve as catalyst. The case writer suggests a more problem-solving participatory project would have been more effective: "Here an action centred research network methodology, with the initiating agency assuming no more than the role of *lead agency* or catalyst, is likely to be more fruitful in terms of impact than a traditional research and dissemination methodology" (Bajaj-Pune: 9).

IDRC's Role. Although an IDRC PO was active in initiating this study, the project was orphaned twice in its two-year life. No PO ever visited the project, there is no evidence of PO interaction with the project throughout its life, and IDRC did not make any effort to disseminate the final report, or link the research to other projects on urban issues. Presumably, more IDRC input might have enhanced the reach and impact of the project.

Conclusion. In the end, this small project seems to have had a negligible impact. "This project is a typical sample of bits and pieces of work that get done by donor agencies, which while good in themselves, simply don't add up to any visible impact" (Bajaj-Pune: 9). Little capacity building was probable, given the nature of the host institution and the principal investigator's relation with it. It does not appear to have had any impact on policies that affect street food vending, nor on the practices of the vendors themselves. In the end, the project produced a good report, a couple of dispersed knowledge issues, and perhaps some increased awareness among vendors of hygiene issues.

F. *Resource Cost for Under-Nutrition and Morbidity, India* (93-8300)
Manjul Bajaj

Project Description. The Centre for Multi-Disciplinary Research in Karnataka used survey data from households and a health clinic to determine the economic cost of ill health and nutrition. In a time of budget cuts to social sectors, the project's analysis was to be used to argue to policy makers that they should target resources to improve health and nutrition. Local medical officials and academics worked with the project, although only academics attended the seminar at which the results were disseminated.

Outputs. The project produced a technical report with solid economic analyses aimed at an academic audience. It also developed a methodology for determining the resource cost of under-nutrition and morbidity, as well as a software program to analyse data for the methodology. Eighteen people were

trained in data collection and field research.

Analysis: Reach and Impact. The research results were of high quality, however, the project failed to package its results and distribute them to the wide varieties of appropriate audiences, and thus failed to have an impact on policy. Reach extended via the advisory committee and the final seminar, as well as some lectures given by the project leader to teachers of economics (who presumably could have spread the research to the various colleges in which they taught). Results were also disseminated through the print media and the seminar was advertised through IDRC's MIMAP website.

The main impacts of the project were realized by the people immediately involved in undertaking the research. The CMDR, a fairly young research institution, gained credibility for the solid economic research of this study; CMDR personnel have since been called by government officials for policy advice. The researchers were able to use the data collection and field research skills in other studies for other research centres, other donor-funded projects, and the second IDRC project at CMDR on tobacco. One researcher said that he was using the framework that CMDR had developed in another study that he had undertaken.

On knowledge outcomes, the project has made available empirical data gathered for the study, and two PhD students have indicated using them for their research. One of the doctors consulted for the study claimed that the project produced in him a changed attitude, for now he always looked for economic factors that affect the health of his patients. Within CMDR, other initiatives now include input from an interdisciplinary advisory committee in the design phase, which was an innovation developed for this project.

Characteristics of the Host Institution. Among the positive factors that could facilitate more and better impacts of this project are the personal commitment and dynamism of the project leader, the good rapport that CMDR has established with the groups involved in the data collection of this study, and its strong research skills.

Dissemination Strategy. Impact was lacking in this project partly because its personnel did not thoroughly think through who sould be the target for this sort of study, and how to appropriately package its research results to be useful to those groups. The very academic nature of the technical report would have had to be translated into something more useable by policy makers if that were the intended audience; it would also have had to include an analysis of the present policy and resource allocation patterns in order to put the results into context. The results could also have been used by other groups, but this again would require gearing the research output to their specific needs and interests.

IDRC's role. The project suffered from neglect from IDRC, as it was shuffled around among POs during its initial phases. Perhaps more IDRC input would have helped the project personnel think through how the research results could have been rendered more usable.

Conclusion. This project is an example of solid academic research producing academic results that

must be "massaged" a bit more to make them relevant to potential users. The case writer developed some ideas on how the research results could reach more audiences, and how the research outputs could be made to apply to those audiences. It appeared that some of the research, as well as the skills, reputation and capacity developed through this project, could have been extended in a project that IDRC subsequently funded at the CMDR.

G. *Inland Fisheries, Nepal* (82-0191) Manjul Bajaj

Project Description. The Nepalese Fisheries Development Division in the National Department of Agriculture undertook research into the development of fisheries resources in reservoirs created by hydroelectric dams. Researchers surveyed reservoir fish life and ecology, and undertook experiments in cage culture to investigate the optimum species ratios, stocking densities, and seasonal growth rates. The research took both biological, technical and economic aspects into account. The project emphasized building research and fisheries management capacity. Among the numerous training initiatives, the project supported two key project personnel in doing their doctorates at the University of Manitoba. This Canadian link formed the basis for technical cooperation and monitoring support throughout the project. Local fishers gained exposure to cage culture techniques, and the project supported a Fish Growers' Association which deals with licensing, promoting cage culture, protecting fishing resources and infrastructure, and has lobbied for fish growers' rights.

Outputs. The studies produced papers that were presented at an International Asian Fisheries Reservoir Development Workshop in 1987, and at a 1992 national workshop on human resource development in fisheries research. Experiments led to guidelines for cage culture adoption in the reservoir. Training activities resulted in people receiving two fellowships, three master's degrees, one diploma, seven short technical courses and a two week on-site training course. The project established a permanent field centre at the reservoir site to carry on with the cage culture research, and for extension and support to local fishers; this field station has helped to ensure the continuity of main elements of the project.

Analysis: Reach and Impact. Those directly involved in the project at the Fisheries Development Division benefited from the training they received and experience they developed in doing the research into fish yields, the characteristics of the watershed, and cage culture. They gained international exposure through the workshops in which they participated. The project reached the Nepal Agricultural Research Council's Fish Research Division as well, since its current head received his PhD through project funds. 40 participants from Asia and Canada attended the international conference, while fish development centre personnel, ministries, planning authorities and some donors attended the national conference on human resource development in fisheries research. Within the government, policy makers and senior officials continue to be aware of the project and respect its achievements. Moreover, project personnel joined the network of Aquaculture Centres in Asia Pacific, through which they shared their expertise in Vietnam, Papua New Guinea, Bhutan and Lao PDR. On a local level, the project's activities reached the 416 families who live around the reservoir. "Reach" was more profound, though to the 200 member families who are part of the Fish Growers' Association, including 40-60 families who use cage culture. Notably, increasing numbers of women

fishers have joined in cage-culture activity.

Long-term Training and Academic Links. The main impact of this project was increased capacity; it helped to create the national capacity to manage and do research in reservoir fisheries. Unlike many projects that focus on very specific, technical training for project personnel, IDRC supported two people to do their PhD training, and the project provided stipends for 7 MA students at Tribhuvan to do their thesis research on the project site. Supporting degree education was seen as empowering, perhaps more so than the typical short courses that donor-funding provides. Linking academic degrees with the project also resulted in better research, since the high academic standards of PhD and Master's research were applied, personnel took a higher personal interest in the project, and academic supervisors also took a more active role in monitoring the research. Over its duration, many Canadian experts visited the project, including consultants from the Department of Fisheries and Oceans, the University of Manitoba, and IDRC program and training officers. Moreover, in addition to the degree education, the project also provided for some other shorter-term training for other project personnel. Given the positions that some of the key project personnel currently hold, it was clear that this investment in training was being put to good use in Nepal's fish resource development.

The potentially negative impact of brain drain as a result of overseas degree training for project personnel had not yet happened, nor did there seem to be any evidence of it happening in the near future.

Duration. While this was not a multi-phase project, it had an unusually long duration for IDRC (8 years), primarily because the PhD students took a long time to finish their doctorates. This long duration appeared to be a positive factor in enhancing the quality of the research and sustainability of its outcomes, since the project personnel, the Canadian supervisors and IDRC all took an active interest in the research and training over this long term.

Training through the Research Experience. Other case studies in this set have indicated that gaining research experience has sometimes been seen as an end in itself, regardless of the utility of the research pursued. In this case, it was clear that there was a good fit between useful, high quality research and useful training, with both producing positive impacts.

Context. The experiments of this project were intended to serve as a model for fisheries development in hydroelectric dam reservoirs. However, because of increasing criticism in Asia of the negative environmental impacts of large-scale hydroelectric dam projects, the number of sites where this model could be replicated has not increased at the rate predicted when the project began in the mid 1980s.

Nature and Users of the Innovation. For the fishers in the region, the project has helped to raise their income, reduce income disparity within the reservoir-area populace, and improve peoples' quality of life. Fishers' average net income has risen close to the net income for farming in the area. In terms of income disparities, cage culture has proved to be more appropriate for small and marginal farmers, who have excess labour capacity which can be used for this fairly labour-intensive strategy. The small, poorer farmers have been able to raise their income through fishing now, while rich farmers with larger land holdings have not had time to try the new technique. Increased fish production has

also led to improved nutrition, and more income to pay for housing, clothing and education, loan repayment and marriages. However, the project's positive impacts in these regards have been dampened since 1992 by two serious floods and a manmade disaster which have left local fishing families with serious losses.

Intermediary Mechanism. The Fish Growers' Association has proved to be an important intermediary mechanism between the on-site research centre and the surrounding communities to enhance the reach and impact of this project. The association liaises between the project office and fishers for training and fingerlings for those wanting to get established in cage culture fishing. As a licensing, security, and taxing body (it imposes a levy for each members' catch), the association has helped to manage the reservoir fishery as well. As a local institution with influence and credibility, the association has been "one of the more critical outcomes of the project in terms of its long-term sustainability and ultimate success" (Bajaj-Nepal: 4).

The IDRC-supported "Inland Fisheries" project built on other projects on cage culture and inland fishers supported by other donors. The Japanese Overseas Cooperation Volunteers, FAO, UNDP, and the Asian Development Bank have supported projects on the same topics in Nepal since the 1970s. The IDRC project expanded this work to a new area, with different biological characteristics and new species, and provided advanced training for fisheries department staff. Thus, "[in] monetary terms the IDRC share was minuscule but nevertheless managed to be effective and visible due to its occupation of a very specific and well-defined niche - i.e. the research and manpower development dimension of the overall fisheries sector strategy" (Bajaj-Nepal: 3).

Conclusion. Of all the capacity-building projects in this set of case studies, Inland Fisheries, Nepal seems to have been the most successful in helping participants develop key skills in useful areas. Beyond skills, the degree training provided two people with the credentials and experience to take on leadership roles within the Nepalese fisheries service. Through the Fish Growers' Association, the project was able to spread its innovation to the tangible benefit individuals and communities around the reservoir. Finally, the project included significant follow-up in disseminating its experience and results through international conferences.

H. *Food Security and Nutrition Situation Analysis, Laos* (92-8016) Anne Bernard

Project Description. This project stemmed from an IDRC-supported workshop that prioritized national health issues in Lao PDR, including nutrition and food security. The project was designed to establish the link between nutrition and food security, and link socioeconomic and environmental factors with food acquisition and consumption. It was also to study the impact of a development program on food security and nutrition, for it was designed to build on a previous IDRC-supported project on indigenous fisheries development. It was housed at the Centre for Medical Sciences, and involved members of the Ministry of Health (who provided a technical advisory committee), as well as the Lao Women's Union (who did the community survey). Researchers from the Centre for Food Security at Guelph supported the project with technical advice and training, for it was their framework for a qualitative assessment of hunger that was used for the project. The project seemed

to become a series of separate activities (training, data collection, analysis), with each phase of activity punctuated by a long period of inaction, until the Guelph team visited again and coached the Laotians through the next phase. Ministry of Public Health officials attended the final workshop, as did an official from UNICEF.

Outputs. The project produced knowledge and training outputs. The data collected through the Guelph framework not only validated the model, but it also provided new insights into malnutrition from qualitative, community-level data. For the Lao researchers, the project experience provided them with increased skills in data collection, analysis and presentation.

Analysis: Reach and Impact The main reach of the project was to those directly involved in its implementation. A few MoPH staff attended the final workshop, and UNICEF had a copy of the final report. The report was never published in Lao, however, which severely limited its potential reach within the country. Moreover, it was difficult to spread research results across government ministries, since there was little inter-ministry communication, no mechanisms for such communication, and a long-standing sense of "protect your donor" and "avoid interfering in others' business". Other mechanisms that could have been used to expand reach, including a Health Sector Donor Collaboration meeting, the CMS library and research abstracts, appear not to have been.

Capacity Building. Both the training and the experience of working with the Guelph researchers addressed the Laotians' capacity and confidence to collect, analyse and present data. However, the researchers admitted that, while they probably still have those skills, but they did not have the opportunity to use them. The Guelph researchers felt that in being able to present and defend their findings to a critical audience helped the Lao team gain credibility and self-confidence. Some of the CMS personnel are now working on other donor-funded projects.

Context - Research Environment. The impacts of this project "are much better described as embryonic than realized. They were also personal, rather than organizational or systemic; and perceptual, rather than concrete" (Bernard-Laos: 9). While perhaps not even developing usable capacity in research, the project may be understood to have widened peoples' awareness of research, and made them want to do more. In Lao PDR, where experience in research is very limited, "participation in the project in itself [was] significant as an opportunity to experience the research process -- the systematic collection, analysis and interpretation of data" (Bernard-Laos: 11).

Community Involvement. For the Lao researchers, the project did raise their awareness of the complexity of nutrition and food security issues, and the interaction between them. This was especially reinforced by the return visits that researchers made to present their findings to the communities who provided the data.

Actors' Motivation. For the Guelph researchers, the project was a fine opportunity to test and validate their framework, even in a weak research environment like the Lao. Partly as a result of this project, World Vision is implementing the Guelph model in Mozambique.

Conclusion. The list of non-impacts in this case seems to be longer than the list of impacts. The new skills and confidence developed through the project have not enabled the researchers to go much

further. The project did not necessarily make the researchers better analysts as much as it introduced them to systematic research, and convinced them of the need to do more. The project appeared to make no policy impacts, nor did it result in improved nutrition in the communities. The project did not influence entrenched divisions between Lao government bodies, which was one of the obstacles to enhancing the reach of the project. In fact, one impact of the project was that one researcher left the Ministry due to frustration with the lack of inter-institutional cooperation. However, this project was one of 15 in health research under the 5 year plan which extended from 1992-96; it is possible that the research experience gained through this project may combine with others and cumulatively produce more positive effects in Lao health research.

I. *Participatory Extension, Thailand* (91-0231) Anne Bernard

Project Description. Set within Thailand's Department of Agricultural Extension, this project sought to increase the use of participatory extension techniques, vesting more responsibility with farmers to choose from a set of technology options and adapt them to local circumstances rather than being presented with a single strategy to adopt. The three main tasks in the project were to understand how farmers make decisions and how extension workers work, to see how PE could be effectively implemented by extension workers, and to develop guidelines for extension workers. DoAE personnel developed curriculum and ran training workshops for extension workers. Activities included field research, conceptual work on PE, curriculum development and training through workshops. Throughout, the project aimed to develop better links between the Department of Agriculture and the Department of Agricultural Extension.

Outputs. The project produced 28 extension officers with some exposure to participatory extension. It developed a well-considered and potentially useful framework for PE, giving some in the DoAE confidence in the validity of the approach. It confirmed knowledge about how farmers innovate, the necessity of participation, and the role of adaptation in the use of new technologies. It also produced the curriculum and a final report on the project experience.

Analysis: Reach and Impact. Those reached, at least peripherally, by the project included the farmers who were studied and those involved in the pilot experiments with participatory extension techniques. Personnel of the DoAE who were involved in the project gained research experience and training, as did the three students who served as research assistants with the project advisor from Chiengmai University. The report was sent to the Department of Agriculture in Bangkok and in the provinces. The report was never published in Thai, which greatly limited its potential for reach.

Extension officers, when using PE techniques, noticed that farmers experienced a change of behaviour and attitude. They were less passive, more articulate in meetings, and more analytical. They were happier. They responded positively to the choice and learning method. These were impacts of the knowledge and awareness produced by the project. Some of the farmer focus groups begun for the project are believed to have continued to meet, even after its termination.

In the end, this project seems to have had negligible impacts on promoting PE within the Department

of Agricultural Extension. Reasons for this are explained below, but an underlying problem seemed to have been that key personnel in the DoAE and DoA were uncomfortable with the lack of central control that PE implies. Finally, there was no discernible impacts from the project reports, either.

Means-Ends Congruence. Among participants, the second training workshop was a positive learning experience. Instead of using lecture format, as was the case for the first workshop, the second used "adult learning" techniques, with more hands-on activities. This workshop introduced changes in thinking about how training should be done within the DoAE. This was an unanticipated impact, since it was serendipitous that the trainer who ran the second workshop came, and brought with him the innovative methods. However, it impressed upon the project personnel the importance of congruence between the goals and the methods of training:

> Using adult learning methods [in the second workshop], ones they would be expected to use later with farmers, gave them an actual 'hands-on' feel for participation. In introducing the project leaders to more meaningful and positive way of facilitating adult learning methods, the workshop produced for them a change in how training itself should be done within the DoAE. As a within-project outcome, then the team had learned the importance and the difficulty of realizing congruence between means and ends in the design and implementation of a learning experience. It was a critical lesson for the project, though apparently one without spread beyond the immediate team... (Bernard-Thailand: 10).

Different Views on Project Goals. Different actors in this project had different ideas of what the ultimate purpose of the project was. IDRC and the project advisor/designer aimed at making senior officials and extension workers realize that farmers can innovate, adapt and choose their own production technologies. The project leader wanted to build better relations between the DoA, the DoAE and Chiengmai University, as well as help farmers learn to discuss and overcome their own problems. A research assistant saw the purpose of the project as finding extension approaches that encourage farmers to evaluate and adapt technologies. These differences in focus could have produced different emphases during project implementation, resulting in its apparent inability to make an impact on the system.

Actors' Motivations. One of the key contextual factors of this project was that wheat was being promoted for this region, but it was proving difficult to grow. One of the underlying reasons why the DoAE was willing to try PE was the limited risk, and potential benefit, perceived in engaging farmers in the exercise. DoA researchers had not yet developed "the" one best production method to transfer to farmers and could therefore afford to present them with a variety of technology options which they could assess and adapt for themselves. The assumption of the DoAE seemed to be that, once found, the opimum approach would be transferred in the usual way. PE was a means, not an end.

Lack of Dissemination. The outputs led to few impacts, for they were not followed up or disseminated. The recommendations for further dissemination were not implemented: neither the coordinating network, nor the handbook on PE methods. The final report was never published in

Thai, which significantly limited its potential for impact. Parts of the research experience were shared in various workshops and conferences, but there has been no systematic attempt to move the results within the DoAE, the Ministry of Agriculture and Cooperatives or other potential users. Project personnel said they were too busy to make this effort; nor have they received any comment or feedback on the English-language report that has been circulated to the Department of Agriculture headquarters or provincial offices.

Learning-Practice Gap. The project reconfirmed belief in the value of adult education styles, and of participatory extension among the people directly involved. However, little change *in practice* around either PE or training within the DoAE seems to have been sustained since the end of the project. One of the university researchers is using the adult training techniques in her teaching now, but little change is evident elsewhere. There has been no change in DoAE policy to promote PE, nor any fundamental reconception of the role of farmers and their relation to DoAE personnel.

Project Mentality. The design of the project was also problematic. Not all relevant stakeholders were sufficiently included in the research, so it was not implemented into DoAE policy as it could have been. As well, there seemed to be a "project mentality" at work, in which the activity was seen as a side-line activity, relegated to the margins of DoAE attention, and easily ignored by all but those directly involved.

Conclusion. This project had a number of positive impacts on the farmers who were involved in the field trials of participatory extension. However, the anticipated impacts of changed practice and policy within the government departments do not seem to have been realized. A fundamental issue in this case study related to how different actors in the project disagreed as to the *nature of the innovation*: the extent to which PE was new to the DoAE, whether it required a significant shift in thinking and approach. Some informants said that PE was a supplement to DoAE's way of working, not a significant threat to it. The project advisor emphasized that a shift to PE was not complex, and that saying so explicitly to help people be willing to take the risk of trying it. However, the advisor agreed that PE did imply a changed role for DoA researchers: "they would have had to be open, in a sense, to an unusually high level of professional uncertainty; to entertain opposition from largely uneducated farmers" in allowing farmers to choose among options, and experiment with them themselves (Bernard-Thailand: 16). Resistance to such changes, on the part of both DoA researchers and extension workers, were major impediments for PE having more of an impact in DoAE activities.

J. *Provincial Education Planning, Thailand* (81-0241) Greg Armstrong

Project Description. Thailand's National Education Commission, a policy studies centre for the Prime Minister's Office, linked with the Ministry of Education to undertake research projects in four provinces as pilot studies to test alternative models for integrated decentralized planning. Using questionnaires, surveys, workshops and seminars, four research teams collected and analysed data on how education planning was currently done in the provinces. Primary training workshops followed for provincial education committees and representatives of schools and teachers colleges to try different approaches to data collection and teach people how to assess needs and collect data

needed for education planning. The purpose of the project was to find ways to make decentralization work, and build provincial capacity to undertake education planning. People from different divisions of the Ministry of Education participated in the training.

Outputs. The project produced the four provincial studies and eighty people received the primary training in four provinces. It also developed a model for provincial planning training, which was used by a subsequent World Bank project which took the model to other provinces. As a knowledge output, the project generated new arguments for and interest in decentralized planning in Thailand.

Analysis: Reach and Impact. Through its training activities, the project reached 36 officials with high-intensity training (they were the ones involved in the data collection for the four studies), 120 provincial education officials with primary training, 700-900 officials in post-project training, and 30 officials with policy information. Researchers presented the findings and recommendations of their case studies in a seminar which was attended by very senior officials, including the Minister, Permanent Secretary and Directors-General of all the Departments of the Ministry of Education. The presence of these people, especially the minister, validated the topic and the importance of the project; he continues to support decentralization in his current (1997) position as PM.

Although this project aimed to promote the decentralization of education planning in Thailand, its main immediate impacts were those related to training in data collection, which indirectly did lead to an increased capacity for planning. Yet more than ten years after the project completion, it is possible to see that this focus on decentralization and efforts to build provincial capacity did complement subsequent initiatives on the same themes.

Skills Not Immediately Relevant to Context. The capacity impacts appeared not to be very useful, at least initially. The training components were undertaken outside of a pressing need for those skills. When asked about whether the training was applied to officials' work, the Director-General of Nonformal Education (a participant in the project) said:

> Not immediately. You see, this was just training, which was good, but there was no real demand for their skills, after they developed them... So, after the training, while they had new skills, most of the data they collected, even if it was better than before, was not used for anything which would change, in policy at the central level. But, later we had another project, which was aimed at improving the progression rates to secondary school, and we had a direct order, to see that progression rates improved. Then we had something concrete to aim at - real programmes with real outputs. The IDRC project had used hypothetical issues for training on planning. But for progression rates, well, it was not really a project funded by the outside, it was a decision of the Thai government, a policy which had to be implemented, and implemented quickly...(cited in Armstrong-Thailand:8)

The results of IDRC training on data collection in the provinces came to good use for this demand from the Thai government. Another impact of the training was that some of the key people trained were able to serve as trainers in a subsequent project sponsored by the World Bank.

Context. The context of education planning, government ministry relations, and national trends playing large roles in subverting the ambitious goal of the project to decentralize education planning. Although decentralization had been an issue since 1976, at the time of the project, planning in Thailand was very centralized, with all policies and programs emanating from Bangkok. Thus, while the innovation that this project proposed was not completely new, it would have been a radical departure from current norms; it challenged power structures, for it would call for a change in relations among government departments. Communication in the education system was very vertical; departments reported directly to headquarters, and "there was little or no coordination between planning at the primary and secondary levels, or between secondary and vocational, or between both of those and the labour market demands" (Armstrong-Thailand: 5).

Buffer. On the other hand, the emphasis on decentralization has continued since the IDRC project. In fact, the IDRC project was the second in a series of four such initiatives on education decentralization since 1976, with the others being carried out by the UNDP and the World Bank. Informants claimed that the IDRC project's contribution was to keep discussion about decentralization alive, move thinking about it marginally forward. It is only recently that decentralization seems to be becoming a more viable political option, though somewhat ironically, this may be more related to budget cuts, economic crisis, and constitutional changes than to senior officials becoming convinced that it leads to better planning.

Changed Relations. One impact of the project was changed relations among the different actors involved. Previously, the Department of Education did not have active relations with the National Education Commission. The latter was regarded as a "rather academic policy institute, removed from the realities of day-to-day planning" (Armstrong-Thailand: 8). There was a significant increase in mutual understanding of work between the two on personal and institutional levels through the project, as evidenced in more officials moving from one to the other in their career, something which had not been the case before. Moreover, the project appears to have had an influence on the NEC adopting a more practical research agenda.

Conclusion. The impacts of this project were difficult to tease out from subsequent donor-funded projects on similar topics. This project can be seen as contributing to larger processes and discussions around decentralization; it kept thinking alive on the topic and moved it marginally forward. The increased planning capacity and the studies produced were not immediately useful, but informants could cite later examples of when the results could be brought to bear on a more pressing issue. One positive impact of the project was in creating better working relations between two of the key actors involved, the NEC and the MoE. As decentralization becomes a more important trend in the next ten years, the impacts of this project may be more clearly seen.

K. *Health Research Capacity Building, Cambodia* (94-8005) Greg Armstrong

Project Description. In the post-conflict reconstruction of Cambodia, this project aimed to strengthen health research capacity, create provincial networks for disease surveillance and train

Ministry staff. Health practitioners without research experience were chosen from different institutions to participate in training on quantitative research methods, and were given the chance to do a field study relevant to their own work. Members of the Chulalongkorn University in Thailand ran the initial two month course in quantitative research methods, and supervised the four month field research component. Participants presented their findings in a final seminar. Ultimately, the project's goal was to build the capacity of Cambodian health researchers to detect diseases in rural areas earlier and effectively treat them. More intermediate intended outcomes were feedback about health policies, field health practices, and the individual research projects. Since the project participants included people from a number of different national health institutions, the project also implied developing better working relations and coordination among these institutions. The project had the support of the Minister of Health, who ensured that senior health staff were able to take part in the project.

Outputs. The most important output of this project was the training of the 13 health practitioners from different institutions in health research, including quantitative methods and field work. Five good quality research reports were produced through the individual field research component of the training, each recommending specific actions in different areas of rural health. The reports were published in the *Cambodia Disease Bulletin*.

Analysis: Reach and Impact. Those reached by this project included the 13 people who participated in the training, and the four Thai teachers. Somewhat more removed from the project, the Minister of Health was aware of it and supported it. The Thai trainers subsequently used the more work-based, action-research training methodology from this project in their College of Public Health's outreach program, further reaching 50 more students. Subsequent to the project, a number of donor agencies have been reached by the project in that they have contracted some of the original trainees for some of their projects and providing further training to some.

As yet, there have been no policy impacts from the project. The five studies were judged to be of good quality, but there were no government resources to follow-up the research, so their recommendations have not been implemented. Senior officials maintain, however, that were resources available, the studies "would have provided a firm basis for action" (Armstrong-Cambodia: 5). One study's recommendations on bednet use to control malaria have been taken up by the WHO.

The project faced the difficulty of participants being pulled in a number of directions. Even while the participants were funded for their time in training, they were still sometimes needed for their normal job responsibilities, given the paucity of qualified health personnel in Cambodia. The project had the impact of reinforcing their commitment to pursuing careers and skills in public health, although constant political upheavals makes careers uncertain. On an individual level, participants in the IDRC project have taken on leadership roles in training projects funded by other donors. Two of them even went on to further training outside Cambodia. Interestingly, one of the main aspects of training that participants appreciated were the skills they gained in English, making presentations and word processing.

The project was conceived of as the first phase of a multi phase process. However, neither IDRC nor

other donors carried the good beginning on the establishment of a network to further the research, monitor rural diseases or continue training. Thus, the longer-term impacts of improving responses to disease in Cambodia and building institutional capacity have not yet materialised. Immediate knowledge impact could have been enhanced if the training had been done in Khmer instead of in English. At this point, some material is being translated into Khmer, including a teacher's guide, a book on basic epidemiology and one on health research methods. These materials were supposed to be distributed to all the provinces by the end of 1997.

On the Thai side, Chulalongkorn University had an interest in trying out the field/participatory training methodology. They were in the midst of extending the role of the School of Public Health and were considering using such training methods in their courses. If it worked in the Cambodian project, where doing field work would be very difficult, and research capacity was not as strong, it would likely work in Thailand. The project also laid the ground work for their expanding into international training.

Conclusion. The project was originally designed as the first phase of a potentially three-phase project. If other phases had been funded, the gains in skills and research capacity could have been further honed and put to use toward the project's larger goals of improving disease surveillance, prevention and treatment. This would be especially true in the very weak research environment of case in Cambodia. As it was, the project left participants with one good experience which served a couple in advancing their opportunities for more work or education, a couple of good reports whose recommendations may well never be implemented, and a good learning opportunity for the Thai trainers which has broadened their expertise in teaching methods.

L. *Three Strata Forage System, Indonesia* (83-0227 and 90-0263)
Suhardi Suryadi

Project Description. Set within the University of Udayana, this research project formalized and intensified traditional fodder production systems for livestock raising by introducing new plant materials, systematizing the management of plant resources and developing different animal husbandry practices. Using an incentive system, the project gained farmer participation to do on-site field trials of the three strata forage system (TSFS) in southern Bali. Research results were published; training was provided to farmers, government officials, NGOs and other interested parties; and the system was promoted in several government and non-government programs. The project intended to improve soil fertility and conservation, improve fodder and animal productivity and ultimately increase farmer income. However, despite academic and institutional enthusiasm for the fodder system, the targeted farmers at the project site seemed reluctant to continue using TSFS.

Outputs. The outputs of the project included the three strata forage system, publications of their research results, including 2 graduate dissertations, 27 undergraduate papers and 8 papers. Numerous people were trained in TSFS, including 298 farmers, extension workers, and officials from the Department of Livestock. The Ministry of Agriculture took such an active interest in the system that they published their own manual on TSFS for their Department of Livestock offices. The project

received media attention, and was featured in newspapers, radio and television. The three strata system, publications and training were of high academic quality.

Analysis: Reach and Impact. The project's reach initially enveloped the project personnel and the 26 farm families who were involved in implementing the experiments. This included male farmers who generally took responsibility for cattle, and a growing number of female farmers in phase II, who handled goats and other smaller livestock. From there, neighbouring farmers around the experimental site took up part of the innovation, as it suited their needs and resources. The project trained 298 farmers from three districts in the method, and government programs spread the innovation to different places throughout Indonesia. Reach extended through the training workshops, site visits and publications to other international donors and government agencies. A supplementary budget helped with this further extension of project reach beyond the original site in Bali to other Indonesian provinces.

Reach and impacts continued after IDRC funding ended in 1992 as other NGOs and the government promoted TSFS in other areas. Five other papers have also since been written at Udayana University. This wider influence and involvement in the project should help to ensure potential for impacts from this project.

Throughout the research process, the project had the positive impacts of providing farmers with additional income and livestock, for participating farmers were compensated for their involvement with testing the forage system. However, the project did not seem to achieve the longer-term types of impact that could have been possible had it strengthened both men and women farmers' ability to experiment and modify their own fodder systems to suit their traditional livestock rearing techniques. After the project was over (and the incentives gone), farmers did not maintain TSFS as an integrated system, though some still planted the type of tree that had been introduced. Thus, the primary goal of the project remained unmet.

TSFS has been incorporated into government livestock programs in all Indonesian provinces, for the Ministry of Agriculture financed TSFS training for 30 provincial livestock officers. However, despite this support, it seems that no businesses have taken up the forage system, for while it seems interesting conceptually, it is hard to implement. On the other hand, an unintended positive impact of the project was the "regreening" of parts of southern Bali, which benefits the local tourist industry.

Participation. Impacts of the TSFS could have been greater on the targeted farmers had the team taken a more participatory and farmer-directed approach. As the case writer points out,

> TSFS was primarily developed as a management technology that provided integrated solutions to production and environmental challenges, rather than engaging participants in understanding theses [sic] issues... the TSFS project was conceived of primarily in technical and economic terms... rather than as a [sic] integrated or holistic community deveopment [sic] project. (p.2)

The project was not about empowering farmers to experiment and adapt for themselves, but rather

to implement the fodder system along the strict instructions it had outlined. A few years after the project ended with its attendant incentives for the participating families, farmers were only using a small part of the system. As a package, they considered it was too expensive, labour-intensive and ill-fitting their traditional way of raising livestock. The absence of extensive participation and collaboration left the innovation inappropriate for the intended beneficiaries. Even though reach extended from the project to other government and non-governmental organizations, it is not clear that their projects had any greater success in getting farmers to use the system than the university-based project did, though perhaps they will be more flexible in its application and allow farmers to experiment more.

Policy, Geographic and Social Context. As an innovation, the TSFS was relevant to the local policy context, for government policy favoured increasing meat production, especially to provide for the large tourism industry in southern Bali. However, despite this policy, the issue of "regreening" raises the question of whether the context of southern Bali and its current shift to a tourism-based economy made the project site an inappropriate research site, and less likely to sustain impacts of three strata forage than would be a site where livestock raising is more integral to the local economy. Moreover, the project may have had a negative impact among the farmers, by undermining the traditional cooperative ethic of Balinese people by using monetary and material incentives to ensure farmer participation in the field trials of TSFS. While the researchers considered it necessary to ensure participation, it also seems to have clouded the anlaysis of TSFS viability.

Conclusion. The three strata forage system was heralded as a very successful development strategy, with research showing its potentially significant environmental and economic benefits to farmers. Government officials and NGOs eagerly promoted it in different areas, and many international donors came to visit the project site. The IDRC funding even included measures to expand the reach of this project beyond its initial site in Bali. However, the nature of the innovation proved to be inappropriate for the farmers that it was intended to benefit, and would have to be made more flexible and adaptable to fit the realities of farmers' divisions of labour and traditional rearing practices. The project suffered from a lack of meaningful involvement by both male and female farmers, and inadequate understanding of their social and economic realities. It is quite possible that with the ongoing use of this system, this adaptation will take place, and farmers will derive more of the potential benefits of the three strata forage system.

M. *Sustainable Land and Forest Management Project, the Philippines* (91-0074) Rizal Buendia

Project Description. The Cordillera Studies Centre of the University of the Philippines College at Baguio undertook this 2.5 year study of the natural resource use practices of indigenous people and of government policies that influence the management of land and forest resources. Though trying to be interdisciplinary, the social and natural scientists worked basically separately, in their own teams. Research results in the form of new knowledge was intended for policy makers to improve natural resource management policies for the Cordillera and for the communities to be able to use the findings of the natural science research in order to see how their cultural practices relate to

sustainable development.

Outputs. The products of this research were new knowledge, publications, two consultation-dialogues among the researchers and relevant NGOs and GOs, as well as a community meeting. The results were disseminated in a variety of ways:

academic papers, some presented at conferences with national and international scope;
komiks summarizing findings regarding indigenous natural resource use patterns to be shared with members of the indigenous communities;
a video; and a
brochure aimed at local government officials summarizing the research project.

Analysis: Reach and Impact. Even with this attention to "packaging" the research results in different ways to make them appropriate for different audiences, the project fell short in realizing the impacts that it had intended either within Philippine policy or among the indigenous people in the Cordillera. The project failed to engage policy makers, though some local government officials received brochures about the research results. Discussions with stakeholders suggested that the research was not taken up to the benefit of the indigenous communities.

The project's impacts were limited to the researchers immediately involved. Research assistants gained skills, experience and changed attitudes through the project, and many have been able to use these fruitfully in other positions and projects. However, some of the impacts of the research process were negative, for it stirred up conflict among the natural and social science faculty members involved. The project was a learning opportunity about interdisciplinary research, but the process was quite difficult.

The content of the komiks appeared not to be useful for the communities; generally they mirrored back patterns of natural resource use common to the area. It does not seem that these were used in a way that led to communities reflecting critically on their own practice. Moreover, some informants criticized the *komiks* as inappropriate because they made cultural references that would be unknown among people who lack televisions and electricity. Some of the text was considered insulting, for it blamed the people for using agrochemicals and destructive forestry practices without citing structural and political factors that left little option for more sustainable livelihoods.

The project appeared to do little more than document practices and policy-making procedures; nor did it meet their objective of analysing the dynamics between those two. Thus, *bad research left little room for positive impact.*

The project was not participatory, a methodology decision which appeared to contribute to limited impact. People in the communities and other key stakeholders including NGOs and government officials were asked to provide data for the study, but they were not included in its design, data analysis or any other part of the research process. Even the consultation-dialogues seemed to be used solely as a data collection activity rather than a sharing of information geared toward its final use. Moreover, the community meeting with indigenous peoples was used to verify the studies results instead of as a means to engage the communities in reflection and dialogue about their patterns of

resource use and the impacts of government policy. The case writer shows that instead of being participatory, the extractive nature of this approach alienated key stakeholders from the project, and left bad relations in its wake.

Research users and beneficiaries were ill-defined by the project. This is linked to the lack of both participation and of a clear sense of the overall purpose of the study.

High staff turnover and weak leadership hampered project implementation. This reduced the quality of the research (e.g., an extended delay in choosing which communities would be used as project sites, partly due to difficulties in reaching consensus between natural and social scientists, data could only be gathered during one cropping season instead of two). Part of this was built into the project itself, for the main designer of the research was funded to leave immediately to do PhD work in Belgium. Stronger leadership may have been able to deal more effectively, quickly and less damagingly with the conflict between disciplines, and been able to integrate the social and natural science components better.

A related problem can be termed as a *means-ends congruence within the research project.* This project was intended to be interdisciplinary, and yet it was designed with four separate com-ponents, three of which were social science and the fourth natural science. The interdisciplinary synthesis was supposed to happen over brown bag lunches, but the project appeared unable to develop a coherent interdisciplinary approach and methodology, trying instead to merge very different perspectives while the research components were moving in different directions.

Lack of "impact mentality" among faculty researchers. The main researchers in this project believed it to be "pure research" that was not necessarily geared to having an impact among policy makers or indigenous communities. This seems clear in that the project did not take advantage of a very favourable context to make their research results known among policy makers. The Philippine government passed a fairly progressive Indigenous Peoples Rights Act in October of 1997, but the researchers did not take advantage of opportunities to discuss their research results with policy makers during the drafting of this legislation. This seems to indicate that while the project did make efforts to disseminate their findings through different fora, they were not strategic in finding ways to tap into larger processes to make their research relevant.

Conclusion. On paper, this seemed to be a solid research project. The components were supposed to be integrated in a series of "brown bag lunches" with members of the project team. The results were to be disseminated to relevant stakeholders through consultation dialogues, workshops, conferences, papers, *komiks*, and the brochure. And the project was obviously looking at a pertinent issue: natural resource management among indigenous peoples, and the government policies and other interests that affect local patterns of resource use. However, the case study of its impacts shows that internal difficulties between disciplines plagued its implementation and quality, and ultimately the mechanisms for its dissemination proved of little use. A participatory approach could have ensured that the stakeholders were more adequately involved and, taking ownership of the research, they could have been empowered to change their situation. In the end, the project seemed to lack a compelling rationale for why the descriptive research was being done, and how it could be

useful for its intended users. Thus, what looked like a strong project ended up having marginally positive capacity-building impacts for the more junior researchers involved, but no or negative impacts for other researchers, policy makers and indigenous peoples.

This case study raised two other significant ideas. First, was the case writer's distinction between tangible and intangible outcomes, with intangible outcomes (e.g., changed perspectives, new knowledge) being more sustainable than tangible (e.g., a brochure or article). The former are part of, and live on in, one's consciousness; the latter have shorter "shelf-life" as it were, and/or can more easily be shelved. Intangible outcomes are more transferable and have an innate multiplier effect, and therefore have more potential to sustain their impacts. Second, the point is raised that there is a certain moral imperative in development research, that it have positive impacts on the people or situation studied, not simply knowledge generation.

Conclusion

This chapter relates the main points analysed in each of the case studies as concerns the reach and impact of these IDRC-supported projects. Table II summarizes what sorts of impact each project has had, disasgregating impacts stemming from the research process from those resulting from the utilization of research results. Such a table necessarily simplifies the data presented in the case studies, but can be helpful as both a summary and a means to compare impacts across cases.

The table shows that the majority of the projects had high or medium degrees of positive impacts in the areas of individual capacity building, and new knowledge and raised awareness. These can be seen as first-order levels of impacts of the research process and use of results. Slightly over half of the projects resulted in building the capacity of the host institution, while other projects either did not have this as a goal, or failed to achieve it. Changed relationships is the only area in which there were negative impacts identified in the case studies, but it should be noted that there were also cases of highly positive, but unintended impacts in this area (e.g., Thai Education).

Regarding impacts stemming from the utilization of research results, about half the projects aimed to create changes in practice and policy as a result of their research, but failed to do so. For those that did have policy impacts, it is interesting that two were housed within government departments, but the other two were initially in universities, and the one has since become its own NGO. Moreover, three other projects which were undertaken through government ministries also failed to have policy impacts. Thus, while some projects failed to achieve policy-level impacts because they did not incorporate key policy makers in the research process, it would seem that merely having appropriate government departments involved does not guarantee policy impacts either.

Finally, the last column in the table notes which project's results were able to achieve a more significant degree of impact because they complemented other research projects, policy agendas or some other element of its context. The Three Strata project in Indonesia, for example, complemented both the government's policy favouring livestock production, and had the unintended benefit of "regreening" the popular tourist area of southern Bali. The Thai education project ended

up being one of four significant projects on decentralization that has become useful years later as Thailand is only now implementing a more decentralized approach to education planning. Some of these cases of complementarity can be seen as serendipitous, but others point to issues of astute planning or seizing key opportunities to advance a research agenda.

Table 3 summarizes the case study data regarding the reach of the projects examined. The table notes when during the reach process the different individuals or groups were reached. In some cases, groups or individuals were involved (and therefore reached) throughout the entire project cycle: during project design, implementation, termination and follow-up. However, the table shows that most individuals and groups are still reached at the end of the project, or after it has been completed.

This chapter draws out the key points raised in each case study both to provide an overview of the data we are using in this synthesis, but also to draw out key elements of reach and impact of development research. The following chapter will take this analysis further, especially by analysing what factors across the cases were particularly influential in enhancing or diminishing the reach and impact that IDRC-supported research has had.

Table 2. Types of Impact Described in the Case Studies

Project	Research Process			Utilization of Research Results				Complementarity
	Individual Capacity Building	Institutional Capacity Building	Changed Relationships	Knowledge	Raised Awareness	Changed Practice	New Policy	within Context (✓= yes, ×= no)
Guatemala - Water	n/a	n/a	n/a	✓	✓	✓ (among donors)	✓ (among donors)	✓
Mexico - Resource Mgmt	✓✓	✓✓	✓✓	✓✓	✓✓	-- ✓✓	✓ (emerging)	✓
Benin - Bednets	✓✓ (Benin, some Cdn)	✓ (Cdn) ✓(Benin)	× (conflict in Benin)	✓✓	✓✓	✓✓	✓✓	✓
Cameroon - Information	✓	✓	✓	✓	✓✓	✓	n/a	×
India - Food	✓	n/a	--	✓	✓	--	--	×
India - Resource Costs	✓	✓	✓	✓	✓	--	--	×
Nepal - Fisheries	✓✓	✓✓	✓✓	✓	✓	✓✓	✓	✓/×
Laos - Nutrition	✓	--	--	✓	--	--	--	×
Thai - Extension	✓ (farmers) ✓ (extension workers)	--	✓	✓	✓ (farmers) ✓(extension workesr)	✓ (farmers) -- (government)	--	×
Thai - Education	✓✓	✓	✓✓	✓	✓	--	✓	✓
Cambodia - Health	✓✓	✓✓	✓	✓	✓	--	--	×
Indonesia - TSFS	n/a	n/a	n/a	✓	✓	✓	✓	✓
Philippines - NRM	✓	--	×	✓	✓	--	--	×

✓✓ high degree of positive impact
✓ medium degree of positive impact
✓ low degree of positive impact
× negative impact
-- no impact, though anticipated
n/a no anticipated impact, or not applicable

Table 3. Project Reach Described in the Case Studies

Project	Research team	Others in host institution	People in related institutions	Buffer mechanism / organization	Intended users/ beneficiaries	Policy makers	Community-level people	Readers of publications	General public	Inter-national
Guatemala - Water	1,2,3		1,3,4			3		4		
Mexico - Resource Mgmt	1,2.3,4	1.2.3,4	2.3,4	2,3,4	2,3,4	3,4	2,3,4	4	3,4	2,3
Benin - Bednets	1,2,3,4	2,3,4	3,4	2,3,4	2,3,4	3,4	2,3,4	4	3,4	2,3,4
Cameroon - Information	1,2,3,4	2,3	3,4		2,3,4	n/a	2,3,4	2,3,4	2,3,4	4
India - Food	1,2,3		3		2,3	3	2,3			
India - Resource Costs	1,2,3,4		1,3					4		
Nepal - Fisheries	1,2,3,4	4	3,4	3,4	3,4	3,4	3,4			3,4
Laos - Nutrition	1,2,3	3	4							4
Thai - Extension	1,2,3	3			3	1,2,3	2,4			
Thai - Education	1,2,3	3,4			3,4	3				
Cambodia - Health	1,2,3,4			4	2	1,2		4		4
Indonesia - TSFS	1,2,3,4		3,4		2	3,4	2	4		4
Philippines - NRM	1,2,3,4		3		3	3	2	3,4		

Legend

1 pre-project 2 during project
3 end of the project 4 after the project
(blank means either don't konw, unclear or not relevant)

IV. IMPACTS AND THE FACTORS WHICH INFLUENCE THEM: SYNTHESIS OF THE CASE STUDIES

A. Introduction

Impacts

Section III of the review provides a detailed accounting of the impacts considered to have been realized by each of the projects. As these reveal quite graphically, impacts are far from easily achieved -- this especially in terms of influencing policy innovation or reform. Such apparent lack of success was not a function of poor quality research; projects which seem to have had no impact on policy were considered to have realized outputs of particularly high standards (e.g. costs of under-nutrition/Dharwad). Nor was it necessarily a function of being too far removed from the policy community involved. Projects which took place immediately within that community and dealt with issues already deemed of policy concern nevertheless made no apparent contribution to policy change (e.g. nutrition and food security/Lao PDR).

The question is not, however, as simple as "impact, yes or no". Provincial education/Thailand made a difference to decentralization policy "probably". It contributed "cumulatively". As complement to several other projects of similar purpose, it helped to ensure that the issue stayed on the policy table and under discussion as part of the learning environment at different levels and locations of the education system and was, in that most general sense, used. And several projects, either with no explicit plans to influence policy, or with no success at doing so, did perhaps lay the groundwork of potential impact: by enabling staff, as potential policy-makers, to acquire some of the analytical, presentation and conceptualization capacities which may eventually enable them to do better policy-making.

As discussed in Section I, for the purposes of the case studies, impact was defined fairly simply as anything realized from or through the project which "made a difference" from a users or beneficiaries point of view -- with both of these latter categories left again fairly open. *Impact was thus (although not always easily) distinguished from the processes, outputs and results of the activity by being defined from the perspectives of (i) the research-user side of the relationship and (ii) of making a difference.*

Again in relatively broad terms, impacts realized through the projects were described in terms of being tangible and intangible; immediate and incremental; individual, institutional or broadly social insofar as they touched policy. Most were considered from a positive point of reference, although several were negative from at least the perspective of some who were reached by the process.

It also became clear, however, that impacts had to be modified in other ways as well since they rarely seemed to occur in an immediate and/or completed form. Most were defined in terms suggesting groundwork laid or progress toward, by adjectives such as potential, complementary, cumulative, meandering, ambiguous, probably realized -- or apparently not. All of these distinctions, while somewhat academic, are important to the extent they help in establishing a better fix on what a project has really accomplished, how it might have done better and where it might have value "yet

C. Research-User Linkage

C/1 Nature of the Innovation and Processes of the Research Enterprise

Innovations

As detailed in Section III, the projects reviewed attempted and realized a broad range of outputs, tangible (reduced malaria rates, multi-strata forage, computer-based data analysis programmes) and intangible (greater self-confidence, awareness, initiative). While from the user/beneficiary perspective, the latter almost certainly constituted impacts, relatively few of the projects appear, so far at least, to have realized "impact" in any major way. Among the range of factors discussed here, probably the most critical -- because it directly involves reach -- was the set of influences pertaining to the issues of innovation complexity and compatibility, and the extent to which the project was appropriately able to recognize and accommodate them, both in doing the research and in linking results to users. These were issues raised in different ways in all of the case studies, at least by inference. Significantly, perhaps, they were the factors taken least into account by and in the projects themselves.

Reiterated in various ways throughout the review, the *nature of the research product* (including the research itself as an innovation in the case of action or participatory approaches) is a critical factor in influencing both reach and impact. Any innovation, be it in the form of new information, ideas, behaviours or technologies, will make demands of some kind on those expected to use them or benefit from them. Few results of research, and certainly not the kind intended from IDRC-supported research, are simply "done to" people as its beneficiaries. Even a relatively delivered technology such as vaccinations, to have the broad effects intended, require those inoculated, their families and their communities to build it into an overall change toward healthier life styles.

Research outputs can be quite simple and readily compatible within user contexts, implying only the addition of new, but confirming, information to existing knowledge or practice structures. These are easily applied. They are also likely to be fairly minor in terms of creating major development change.

Much more significant, certainly for IDRC, are outputs which imply or require significant change e.g. that current thinking, behaviour or relationships be cast aside to accommodate new and, perhaps, fundamentally contradictory ones. In the long run, these are often the types of changes necessary to make the improvements to quality of life, work or environments intended by projects sustainable. Unfortunately, the more meaningful and sustainable the change, invariably the more difficult, uncertain and risky it will be. Products which seem irrelevant or those which challenge too fundamentally established ways of thinking and behaving are much more difficult to adapt or accommodate to existing knowledge and practice. They imply costs of time, money and status and opportunity costs; they risk undermining important values. These are changes, then, which potential users (policy-makers, farmers or community members) may be unwilling or unable to make, regardless of their advertised value.

Research on the communication and application of innovation indicates that *accessibility to the innovation*, the more it can be divided up and manipulated by the user, and the more its interpretation into user-accessible form is facilitated, the more extensive will be its reach (i.e. beyond the simple

level of information) and thus the more potential there will be for impact (i.e. sustained use). Unfortunately, few project results appeared to be considered in terms of their complexity or accessibility; few of the researchers undertook such a facilitating role.

The 3-strata forage/Indonesia provided an almost classic example of several of these issues. From the research perspective, the TSF system was recognized to constitute a complex, fairly fixed, innovation "system". It was "...primarily developed as a management technology that provided integrated solutions to production and environmental challenges..."; and one "...exceedingly precise in its recommended ratios of...components" (Suhardi:2,8). Farmers were actively involved, but as means of ensuring consistent, on-field application of the test procedures and data collection rather than as participants in working through the processes and implications involved. Thus, while the project appeared to take good account of the intricacies of the biology of the system, it failed on the whole to account for those related to the human and social dimensions. Consequently, the real complexity of the innovation was missed and little was done to accommodate its fit with users. Rather ironically, the farmers themselves saw the TSFS as, in fact, divisible - and selected from it those elements which could be applied within their resource, skill and risk parameters. Project results, as a whole and as anticipated did not have impact; the project in more general, somewhat ad hoc terms, did.

In almost all the projects, research results disseminated through documents, workshops and even networks more typically focussed on information, concepts and implications for action than on attempting to interpret these in terms of the situations, needs or constraints of specific users -- or even of generic user-types. For example, results of the costs of under-nutrition/Dharwad project were considered analytically sound and well presented through publications and seminars. However, "...the length of and, more importantly, the language of the final report makes it inaccessible to all but professional economists. As very few administrators, opinion and policy makers are that, this is a serious limitation" (Bajaj-Dharwad:6).

In the health training/Lao project, while it might have been self-evident within the research paradigm that an integrated nutrition-food security policy was needed, its results were much less clear as to how this would be accomplished within the Lao development and bureaucratic reality. Implications for changes to bureaucratic behaviour, not to mention the increased levels of knowledge, resources and decentralization implied by the type of nutrition-food security approach suggested in the model, made the innovation a highly complex one. But there was nothing available during or after the project to facilitate the capacity develop or systems negotiations needed to deal with such complexity.

Bednets/Benin did much better, both because the innovation was much less complex from the users' perspective and because the process of introducing it to those users was reasonably interactive in terms of determining their beliefs, needs and constraints and of monitoring the effects and effectiveness of application.

The rural communications/Cameroon project produced publications which were technically solid in terms of content, but the content itself was often beyond the scope of targeted farmers to apply, many of whom could not afford or read it in any case. It also failed to address many of the questions farmers were asking through the Q&A component of the project, diminishing the impact of both

project elements by limiting useful feedback to the farmers and not reinforcing their attempts at managing the information agenda (this the end-goal of the project). The farmer-to-farmer site visits were considered the most successful of the media used in terms of the enthusiasm engendered for the new techniques witnessed, but here again the contents of the exercise were not readily translated "back home". Potential users did not always have the skills to apply them and there were not the human, financial or programmatic resources available to facilitate adaptation. People were "...thus, discouraged, they abandoned attempts to put them into practice" (Assigbley-Cameroon:24).

As these examples indicate, *innovation complexity is closely related to context* as a factor. Recommendations which might imply a reasonably straightforward shift in one setting can present a major hurdle in another. Both the Thai provincial education and the Lao health training projects provided perhaps the clearest examples of this, although in neither case could the innovation be considered simple (according to the Thai project leader, for example, the project <...was really an attempt to strengthen collaborative mechanisms....to change the starting point for planning, to make it a bottom-up process>). Despite being implemented from within the government, and in the Thai case with strong policy endorsement for the direction being pursued, little of apparent significance happened, at least at that time. Any meaningful advances in intersectoral action or local level planning would have constituted fundamental changes in the broader systems of centralized control within vertically managed structures, changes which neither project appeared able to generate.

Innovation-related inhibitors to impact do not have to be as major or seemingly intransigent as these, of course, to do their job. The Mexican project, as successful as it was in engaging users, nevertheless experienced difficulties in some of its recommended changes to crop varieties in the face of competing resources or traditional approaches where farmers persisted with crops perceived to be working well enough to make change an unacceptable risk. Peoples' fear of losing links with traditional ways and the implied insecurity of that; incompatible physical conditions, where soils were too poor to accommodate the new variety; negative side-effects believed to be associated with the change (increased incidence of rodents, for example) were all impediments considered important enough to cause caution for those concerned. A further example was provided in a project Progress Report, expressed somewhat more conceptually, but with still real effect:"Not much progress has been possible (in the activity), because our strategy implies that women must buy (their own) seeds and paternalism has made many people want everything to be given to them. Also competition of other institutions that intervene with clientalistic attitudes creates mistrust and divisions which must then be overcome." (Wind/Sanchez:24)

All of these conditions were product-related factors limiting engagement of community members in specific enterprises, leading to non- or restricted use of research innovations and products, and reducing level of impact in the immediate term. They were also factors associated with potentially diminished impact in the longer term, as anticipated follow-on improvements to health and nutrition, environmental quality and community stability are less likely to materialize.

Processes

> ...the process of addressing the problem in research is equally critical as the answer itself. The quality of outputs is largely defined by the mode of acquiring the products of research. (Buendia:31)

Very much related to the factors of design, goals-methods congruence and nature of the innovation is that of *process*. In one sense, the processes of a project (how it does what it does) could be considered a dimension of its outputs where these are intangible, as in PR. But, in all projects, processes are most directly linked to methodology, and while some methodologies may be inherently more likely to lead to reach and impact than others, all need to incorporate certain fundamental processes if they are to influence change.

The above comment from the Philippine case study is perhaps a truism these days, especially as articulated by proponents of participatory processes. It is realistic nonetheless. The *greater the participation of target users* in the conceptualization, implementation and adaptation of the research, the *greater the likelihood of reach and potential for impact*. If only in terms of the learning gained through the experience, PR has more potential to make a difference by making more tangible sense within the capacities and contexts of those users involved.[18]

All research, and the majority of research supported by IDRC, is not participatory, however. Nor do many projects use even an action-research design (one which locates the investigation immediately within the context of the problem which it analyzes, intervenes on and then assesses in terms of the changes induced). Nevertheless, it was quite clear from the cases reviewed here that there is a *progressive relationship between impact and inclusion*, the first increasing its potential directly in relation to increases in the second. The more academic or technically complex the research, the more distant and difficult its users are likely to be and to reach, in terms of their identification and accessibility to them[19]. The more abstract, risky or at odds with current belief and behavioural systems users perceive the conclusions of research to be, the more likely they are to ignore, reject or fail in their attempts to accommodate them. But, while the researchers engaged in such design and methods may have to work harder because they have less of the immediate contact with users and context which participatory and action researchers do, they nonetheless need - somehow - to try. They, too, need to reach *an audience which cares* if their results are to have life beyond the narrow parameters of the research framework.

Unfortunately, reach is a meandering, diverse and, in the end, largely unpredictable phenomenon; its consequent impacts equally so. This implies that the mechanisms and processes used to engender it will be similarly diverse. Some may, in fact, not be recognized as part of the impact process or, it seemed from the cases, to be missed when they are absent.

In the Dharwad costs of under-nutrition project, for example, while results may not yet have influenced policy, "the multidisciplinary advisory committee format adopted...was conducive to initiating a healthy dialogue between the different disciplines and enlarging the perspectives of many of the participants." (Bajaj:Dharwad:7). It was a mechanism and process which subsequently became

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[18] PR, however, may not necessarily affect the larger community of which participants may be only a limited, and perhaps not representative, number. This is the dilemma of PR, of course: to make a significant difference to a few, but perhaps do little to change the system as a whole.

[19] Beyond other academics. Where the aim is simply to generate and share knowledge, these latter are in fact the users of the research, of course, and to the extent it influences their further thinking and research - positively or negatively - such a project duly has impact. The question for a development agency such as IDRC is whether this is good enough to satisfy its mandate and justify use of ODA budgets.

part of other projects, and thus could be considered impact at the institutional level.

There was similar value in the brown-bag seminars of the land use/Philippines project. Although not fully successful in integrating the separate disciplinary teams, it did seem that these sessions "...broke the dominance of social scientists in (the institution) and disturbed what seemed to be a cloistered character of the natural scientists...". While not in precisely the way intended, it laid the ground, perhaps, for potential impact: "apparently the experience expanded and tested one's tolerance and patience. In a world where studies have become thematic and multidisciplinary, being tolerant and (the) ability to respect differences are imperatives" (Buendia:16) Especially for the young research assistants, this could well have served as a rich forum for insights into the "backstage" of integrative processes - and thus potential impact. According to them, the experience made them more "creative in solving issues" and the project overall made them better analysts of their region, with "paradigms to better explain the realities indigenous people are in" (Ibid:17)

One rather striking example of the unpredictable routing of research messages was the piped water/Guatemala project. While it revealed clearly the savings in time and energy of women having access to piped water, it showed no relationship to better health or nutrition (either as a cause of consequence of having the technology). It was the latter, however, which was promoted and to some extent had impact on subsequent agency/donor priorities and actions. It was never officially disseminated by the research agency concerned, however: <There has been no official action, not a single paper to follow up from the research organization to the (user) agencies. They never met as institutions> (Gomez: oral communication). Rather unexpectedly, the mechanisms of reach albeit for a non-result were the individual agency officers.

The case analysis suggested several explanations for what appears to be the certain lack of logic to the chain. The first related to the *nature of the research process* itself: that it was the creation of the interest group bringing like-minded people together, "not necessarily the results, (which) induced a reflection about the importance of the health-related components" (Gomez:11). The second related to the *credence given results of previous research* conducted elsewhere: that former studies confirmed the direct linkage between water supply and health and warranted application here. The third related to *the turn-key role of the individuals* involved: that "it is the individual appropriation of knowledge which has influenced the application of results" (Ibid:9) - particularly that of one of the project leaders and his energetic promotion of the health-nutrition-piped water link, and of the importance of incorporating this message into community education programmes.

All three explanations make sense in themselves; all three are clearly related to each other through the common thread of individual discretion; all three reinforce the idea that the reach of research and any consequent impacts are, in the last analysis, often likely to be functions of serendipity. Together, they serve to reconfirm the conclusion that the more the actors and the *activities of research are "out there"*, the more they incorporate specific processes which foster inclusion, the more likely they are to find fertile impact ground, either by accident or design, and if not now then later. Again in the Thai provincial planning case, while officers may have made little immediate use of the analytical skills imparted, when in the course of another education policy process several years later the Minister "...required immediate action by all education agencies at provincial level....(that training) was utilized to good effect" (Armstrong-Thailand:7)

Strategies and processes of reach will differ depending on the nature of the research content, of course. As discussed below, they may in fact be carried out best by agencies other than the research team *per se,* through some form of intermediary organization or mechanism to which the research and its users both have access -- a network or association, an interlocutory NGO, a programme department. The common thread, however, is that throughout its full course (inception-implementation-dissemination), a project which provides as wide a range of openings as possible -- of different kinds, through different modalities, to different audiences -- will almost invariably have at least some impact. End-of-pipe dissemination appears to be both far too limiting and too late; researchers and donors likely by then to be looking to the development of the next proposal, rather than application of the old.

In the Benin bednet case, for example, involving the communities interactively in both needs and application assessment appeared to produce a number of impacts: for the target community "...the respect and valuing of their opinions through the various exchanges with the development officers at different stages of the research motivated them a great deal and enabled them to become more involved in local development activities" (Assigbley-Benin:28) More specifically, it also helped to raise the status of women of the cooperative NGO, increasing the prestige of the work they were doing and, from their own perspective, enabling them with greater confidence to express themselves in front of men.

A similar example of small, but not unimportant, processes: by putting together the two partner education agencies for the first time, and including a process of fairly regular exchange between them, the Thai provincial education project provided occasion for previously non-cooperating line and staff units of the education structure to become professionally acquainted; to "...forge important links in a new partnership" (Armstrong-Thailand:8). Participants felt it was more the <u>way</u> the joint activities were run, not simply that they were, which had the lasting value, enabling them to develop both a knowledge of and an empathy for each other's work. This appeared to be a factor leading to better relations thereafter, as well to a number of instances of officer transfers from one to the other, impacts considered good for both line and staff functions.

Running through most if not all of the above examples, and consistently implicated across all projects as an apparent function of the reach and impact they realized, was *learning* in some form: (i) as <u>opportunities for people</u> to strengthen capacities through inputs of education, training or simply having access to the project as a focussed experience with new information and skills; and, consequently, (ii) as the <u>intangible[20] outcome or impact</u> of enhanced (or at least changed) capacity. The Nepal project was probably the most extensive and comprehensive example of the first; all, however, revealed instances of the second. Learning, of course, is essentially a process issue. Not surprisingly, but not less significant for that, the relationship between the processes of the project and its impact was, therefore, most immediately obvious for individuals the more directly they were

[20]Though not a new term, it is one introduced specifically to this review in the Buendia case study with respect to outputs researchers may realize in themselves, but which may apply to anyone involved in/reached by the exercise. They are the "non-material and non-physical outputs which an individual gained as a result of his or her engagement with the project. Sustainability of intangibles can best be manifested through the individual's enhanced and expanded capability to undertake similar or related studies at a higher plane, extended dimension....(They) may be transferred (to other contexts)....(having) an innate multiplier effect as they become part of the individual's being and consciousness..." (Buendia:16-17)

active participants in those processes - as researchers, field implementors, community member interlocutors, policy-makers, other academics. This was the case whether or not the project intended to be a capacity development exercise, or intended it in the specific way it occurred; and whether or not the learning could be acted on. For example, members of both the Thai provincial education and Lao nutrition/food security teams became more sensitive to the value and need of inter-departmental collaboration. In neither case, was this a planned outcome and in only one was it constructively applied. In both, however, it seemed to have endured.

It is not known how, or how broadly and/or deeply, community interlocutors involved in the bednets research, farmer fieldworkers in 3-strata forage, research assistants in the Philippines or donor-members of the piped-water contact group in Guatemala might have been influenced by their experiences with the projects. Logic would suggest the more they engaged with the opportunity, the more impact it had on them. They were all provided, by accident or design, concrete and interactive occasions for learning and to the extent they engaged, they were presumably reached in ways beyond the simply informative. Impacts from this might well have been, or eventually become, profound. As was the case of some of the frustrated rural farmers in Cameroon, or the researcher in Lao PDR, for people who became aware of the existence of other and better ways of working which they were then unable to apply, these occasions may not always be positive - at least in the short run. Such impacts would more likely be positive, however, or their negative elements mitigated, had they been more carefully predicted, noted or facilitated.

It is logical to assume that neither farmers, bureaucrats nor policy-makers - nor their institutions - are likely to learn where there is no or little opportunity to do so. It is, thus, probably safe to infer that learning was limited, if occurring at all, for those indigenous communities in the vicinity of the Philippines' research not apparently implicated at all beyond data collection activities. Neither were policy agencies much touched; project researchers appeared not to have attended any of the public hearings on the Indigenous Peoples Land Rights Act, nor did even "...a single copy of (its) publications." (Buendia:14)

Similarly, it seemed that the Thai participatory extension project had almost no sustained influenced on the policy-makers of the two departments, and hence on any extension officers beyond those immediately participating in the workshops. There was no indication of the farmers with whom the extension system worked being affected, again beyond those directly involved at the time and they not much further. Without *basic institutional change* as a consequence of learning, neither the regular training programmes nor the nature of resources and rewards for extension methods were touched or changed. Unlike the university researcher and chief DoAE researcher, for both of whom the most significant impact was learning how learning occurs and can be better facilitated, policy makers were not reached because they were not engaged.

As with all other factors, the presence or absence of effective process factors did not have to be dramatic to have an influence on reach/impact. The 3-strata-forage/Indonesia project, for example, had its most striking reach, and thus laid the ground for its most likely potential impact, in the exposure and linkages it made, not with the farmers immediately involved, but with their neighbours who watched and "...who could adopt the components...suited to their needs and resources" (Suhardi:6) Similarly, in the rural communications project of the Cameroon, other NGOs had begun trying to put the project's model into place, and in ways they felt would improve it. Reach was

achieved through the people being able to observe the research process.

In her analysis of the South Asian projects, the researcher concluded that projects "...tend to result in one or two grand outputs - a final report or a final workshop..." (Bajaj: Dharwad:7). One could add that whether as cause or consequence, they also result often in a too-final and single "answer". Better, she suggests, are research products which are "smaller, better-targeted and more dispersed (over time)....a 'cafeteria' approach to the dissemination of research results ...which can be taken singly or in different permutations and combinations as per the users' needs (Ibid:7)

Ensuring *production and distribution of research results* in documentary form, of a broad variety of focuses, formats, audiences, is indeed a critical element of process in this context. While it can never be predicted exactly where, when, how or to whom such documentation may spread, and with what effect, it is fairly certain that impacts will not be realized as effectively without it -- especially in the long term after all the actors involved have moved on. Even Pune had a reach through documents, one researcher writing some of its bacteriological methods into her university course (potential impact on students as future biologists), and local school children replicating it in their neighbourhood to win a science prize (possible future impact on their own careers and those of their classmates). Reach in the 3-strata-forage project, with various provincial and national government departments, with domestic and international NGOs and research and development networks, was through a variety of media - different types of publications and TV, references inserted in government extension and policy documents; participation in workshops, seminars, international symposia.

Though not impacts in themselves, as some have labelled them, such *documented, concrete expressions of the research experience* and its results are a necessary condition to impact happening. They will be effective in allowing and/of fostering impact where they are based on well-done and relevant research, both as it is being done and after it is finished; where they are prepared and distributed with specific and varied users in mind (their needs, priorities and interests; their capacities and access); and where they are connected and facilitated through existing structures and systems. Print, film, computer-based documents can all help research results achieve essential in- and post-project exposure.

As a final point here, the question of research processes, and learning within these, becomes especially key when considering that in all of the projects it was *individuals*, and (sometimes) through them their institutions, which were *at the heart of the research-impact relationship*. As producers and transmitters of outputs, and as those who are "reached" by and implement them, it is individuals who make the process happen, and who decline or fail to do so.

To the extent anything happened in the Guatemala piped water project, for example, it appeared to have been through individuals: <the institutions didn't do things; people did> (Gomez: oral communication). Even where otherwise assessed as a failure, for the researcher who gained skills of tact and rapport-building though interviewing vendors, the street foods/Pune project "stood him in good stead for subsequent people-centred research" (Bajaj-Pune:8) In Mexico, the facilitated participation by women in various group, proposal creation and development activities allowed them "...to develop a broader perspective....built the political consciousness of the group...helped them see that they too have a critical role to play..." (Wind/Sanchez:37) Through individuals, institutions and

communities can be changed. From the Thai partner in the Cambodian health project: <We used the Cambodian training as a model for developing similar approaches in other countries; we are now thinking of a regional role for Thailand in work like this for WHO....But the most immediate result was the establishment of a new programme at the university, on education in the workplace>.

The concept of intangible outputs as defined by Buendia is above all an outcome for the individual, incorporating the critical dimension of portability, across time and activity. This is an important point from the perspective of IDRC's assessment of impact; the effects of a research activity on individuals can and should "count", because it is essentially at this level that the knowledge, skills and mobilization outputs of the project will be sustained and moved. In the Cameroon case, although the project and its outputs as such suffered from the high staff turnover, the capacities, knowledge and professional status acquired by the individuals involved appears to have remained with them, to be put into practice elsewhere (Assigbley-Cameroon:29)

C/2 INTERMEDIARY-BUFFER MECHANISMS

A recurring point of this review has been that, while the impacts of research can be powerful and lasting, they are also highly uncertain and unstable. Attempting to manage, predict or ensure them is consequently precarious. A further position is that impact, as a concept, is most appropriately and realistically understood from the perspective of the users/beneficiaries of research, those for whom outputs "make a difference". Outputs, on the other hand, are the domain of the producers of that research. Following from both of these review assumptions, an especially crucial factor in understanding and realizing impact is the extent to which there exists some *agency through which the results of research can be made available to potential users at their own time, in their own way and as suits their own needs.*

The particular form such an agency might take appears to be quite open; in some cases an association or network, in others a more formalized mechanism or institution. And it does not have to be specifically created for or related to the project. According to the former TDRI director, a central point about impact is the fact that researchers are not always equipped, in training, attitude or skills, to cross the line from research to utilization: <they don't tend to have the platform, nor do they necessarily see it as their particular task>. Because of this, the mandate of TDRI became broadly one of interpretation and advocacy: tracking gaps, assessing needs and divining future trends in national socio-economic policy; and, from there, searching out existing research (complemented by some of its own) to synthesize and bring to policy-makers the strategies and recommendations in forms which would make sense for them. Thus, the criterion of "match" was much in mind: <...looking at the message and its likely impact on the receiver and selecting the person most likely to get it across -- the best 'marketer' for the case>.

The sense, then, is of an instrument through or in which the research outputs (new knowledge, behaviours, policy directions, technologies) can make the transition from the paradigm of the research to the reality of those expected to change as a result of it. Zandstra (1979) recognized the phenomenon as "buffer institutions" in the IDRC-supported Colombian Caqueza project. NGOs, extension departments, farmer associations were serving as legitimized "spaces for innovation", for ideas and techniques to be tested and new relationships facilitated outside normal practice.

Consciously or not, such institutions allow for the fact that innovations resulting from research imply demands on existing systems, and sometimes at considerable risk for the individuals involved. They allow also for the fact that the process of negotiation between the old and the new takes time and that it starts for different users at different times and in different ways. Such buffer agents do not necessarily do research, nor are they typically the expected end users of its results. Rather, they are the places where research outcomes and research beneficiaries can come together; the intermediaries which help interpret or recast results and products in ways which make sense from the users perspective.

A number of case study writers suggest the value of such mechanisms being created within or from projects themselves, as associations of researchers and users, as networks, as consultative forums. Of all the projects reviewed, only inland fisheries/Nepal had the development of something like such a mechanism as one of its goals: "...a unit within the Fisheries Development Section capable of carrying out similar programs in other inland water bodies in Nepal" (Bajaj-Nepal:1). It was a goal effectively enabled through multiple factors: a decade of sustained Centre support, within a design which "knit" together inputs of lab and field-based research, graduate education and short course training[21]. It also incorporated regular monitoring, focussed on ensuring coherence across all components. In consequence, the project was considered "particularly successful in obtaining more rigorous research standards, greater personal interest and good quality supervision" (Ibid:2). It also realized a permanent outreach research unit, a field centre which "continues to provide extension services and technical support to local fishermen" (Ibid:3), thus linking the research and user realities.

In the Mexican case, something of the same happened spontaneously, through the decision of the research team to form as an NGO. Not a plan of the project, or at the instigation of IDRC, this was in a sense a product -- or, perhaps, an institutionalization -- of the research process and the way in which the particular combination of people involved interacted within it. The change in status, in turn, appeared to have enabled the research a wider and stronger influence than might otherwise have been possible: "...IDRC funding ended at a critical juncture in the work of the (research organization). Many of the impacts we observed would probably not have been as significant or long-lasting had the organization not continued its work....This seems especially true of the policy level impacts..." (Wind/Sanchez:18). As an NGO, the research team became "...a critical factor in maintaining and expanding the impacts of the research (sub)projects" (Ibid: 3). It had the capacity to attract other donor funds and generate local collaboration.

It might be said that the organization's development as a life beyond the project was a major impact of the project. Its activities presumably became seen less by its own staff and its referent communities in the finite, time- and resource-bound terms of a "project". It appeared that the project had made enough of a difference to lead others to want to buy-in not just to its own programmes, but to the issues and approaches it represented -- thus enabling it both to implement its research results

[21]The project was jointly funded by the Fisheries Programme and Fellowships/Awards Division (FAD) during a period when the intellectual and financial resources dedicated to professionalising the design, delivery and monitoring of HRD/institutional development were at their highest levels in IDRC. Particular attention was paid, within both units, to issues of integration, coordination and sustainable change: of HRD/ID within the research; of trainees within their institutions; of institutions within and across sectors.

and to achieve influence beyond itself (Ibid:5). As an more stable structure, the NGO (and presumably the users of its research) appeared better able to take the risks of reconsidering, recasting and even eliminating unproductive research; and of blending research with monitored application. These are actions which do not come easily in project modalities. Factors such as long time perspectives, iteration and participation were all modes of work recognized by the case studies as keys to facilitating reach and impact.

Still in the Mexican project, the decision of the *promotores* to form themselves into a network might be seen as a softer example of this same phenomenon. In this case, participation by these individuals in the project evolved through the network to become, from the perspective of the project, one of its (unanticipated) outcomes and, from the perspective of those *promotores* involved -- and potentially their communities -- an impact. As "a mechanism for further reach, and a factor facilitating impact of the community-level programs" the existence of these community members as an intact association intending to "...continue their work in experimentation, demonstration and promotion..." has the potential, at least, of making a major difference to sustaining the advances made by communities during the project (Wind/Sanchez:34).

It is not reasonable to expect such evolutions in any but a few projects; nor should it be necessary. Nor is it feasible to create an interlocutor or intermediary mechanism for each project. And while IDRC does create buffer agencies when it creates a network or secretariat, the idea that it might do so in any but rare instances would probably be contentious, implying movement toward a development and institution building mandate not necessarily appropriate for an essentially research organization. The suggestion that the Centre might have done more to establish the bednet impregnation unit of the recipient organization of the Benin project, for example, presents a certain dilemma, but not a unique one: how far to go toward support for implementation structures, as opposed simply to serving as a catalyst to implementation. Structural impacts such as occurred in the Mexican case can happen on their own (and perhaps do, more often than IDRC is aware) if and where the various conditions of context, project design and resources etc allow and warrant it. They are not necessary for enabling other impacts, however.

Another option, of course, is to search for appropriate such mechanisms as they already exist in the policy, sector or programme environment. It appeared to be important to do so. Certainly, a common message from all the case studies was that reach and impact are most effectively enhanced by being integrated into existing structures and systems -- and, as was most typically the case, fail to lead very far where they do not. In the case of the bednets, for example, the ability of the recipient organization to liaise effectively with the Public Health Authority in training, meeting coordination and fieldwork allowed its work to be recognized by other actors "as one of the core partners in the policy team in the battle against and prevention of malaria" (Assigbley-Benin:12). In the case of the Philippines, on the other hand, "...the absence of a mechanism that (would) ensure that research (was) utilized by the Philippines government in the formation or implementation of policies concerning indigenous people"... was a key factor in limiting that project's reach (Buendia:15).

C/3 PLANNING FOR REACH, USE AND IMPACT

According to the case study of piped water/Guatemala, <there appeared to be no thought at the

beginning of the project that anything would be done to apply the results> (Gomez: oral communication). While seeming a rather bald statement to explain a conclusion of limited impact, it was unfortunately by no means a unique one. A persistent theme across all of the projects was that they allowed too little consideration for "what will happen next?". Not all of the projects which incorporated potential users in some way consequently appeared to have impact; other factors intervened. None of those which did have impact of some kind, however, failed to include them.

As suggested above, limitations of the research paradigm itself may be core to failures of reach and impact in reflecting a predisposition against both. The question is more complicated than that; a range of factors mitigates against the easy or efficient application of research outputs. That said, *one of the core factors does appear to be the mindset of researchers themselves and the boundaries they apply to their work.*

Again, it is not a straightforward issue. Researchers probably do not see outreach and application as **not** their role. The perspective is invariably more nuanced. In an interview for the review, an Asian researcher well-known domestically and internationally for his contribution to social policy studies (including several funded by IDRC) was clear that research could not stop at simply an analyzed statement of the problem. While it was <not the job of the researcher to tell ministries they have to do something>, where they do have access to policy-makers, formal or informal, they do have an obligation to make their results available. Even where results are negative, they need to be presented, <but in a way which is constructive>; one which encourages people to engage. The critical point is to get ideas into the policy conversation. The confounding factor in this, however, is that while ministries do act on research conclusions, <by that time the recommended methods are more like their own idea; they don't think of them as coming from a particular study>.

It was here, for him, that the line between researcher and user perspectives is necessarily crossed: at this point <you cannot then blame decision-makers for stealing your ideas, but be content if those ideas do good. If you want to make your name as a researcher, you have to publish. But that is a separate process from getting your ideas used>. It was a view reinforced by another former Centre-supported policy researcher in her concern about the gap that exists in both directions: that many researchers <often simply do not know the implementor's world, and as a result are not able to interpret results in useful ways>. And, from the other side, policy-makers recognize this lack of empathy and say to researchers <it's none of your business>. Based on the vagaries of impact evident from the cases reviewed here, such views are probably realistic.

In the Philippines' project, for example, expected outcomes centred around the generation and analysis of information, with project objectives "... silent regarding the beneficiaries of (these) outputs.... There was no conscious plan to make the indigenous people *as beneficiaries nor (did)* it hope to be an input to policy formulation or alter existing policies." (Buendia:17) Similarly, in the rural communications/Cameroon project, there had still not been put into place "..an adequate strategy for moving ahead with a more immediate involvement of the different development actors..." including the local population (Assigbley-Cameroon:20)

Compounding the apparent lack of a compelling problem, a principal researcher not part of the recipient institution, and that institution itself without established links to any potential user communities, street vendors/Pune presented a similar situation: "...there was lack of clarity about

who the study was supposed to serve....It had no guideposts regarding which side it would be on in the eventuality of a conflict of interest [in the findings]. Thus faced with mixed results, the study was unable to decide upon an appropriate communication strategy and simply down-played some of its important results for fear of harming the interests of one group vs another..."(Bajaj-Pune:6). Whether in consequence or not, the project ultimately "...lacked the involvement of other (key) actors....of municipal authorities, local NGOs and pressure groups who could act on the information....(It) failed to co-opt any of the relevant actors while the study was in process....(and though) well researched, well written and attractively presented, ... municipal counsellors... apparently showed reluctance in even accepting a copy" of its final report (Ibid:3,5).

This last example raises again the issue of innovation complexity, and the fact that most good research will indeed result in multiple, perhaps contradictory results. The problems of the real world are such. This leads to the conclusion that, *without a very conscious commitment to the need for identifying, reaching out to and collaborating with users, few researchers are likely to be willing or able to sort through and match their findings with what inevitably will be a very mixed, perhaps contending, range of user communities.* As suggested above, the inclination to dilute, pare down or tailor results may be strong; the energy needed to translate them into terms suited to induce impact probably not.

The relation between plans and outcomes is neither a necessary or a direct one, of course. A main conclusion of this review, in fact, is that impacts are invariably a function of multiple and interactive intervening factors, following many and uncertain paths. That said, it seems logical to assume that *reach and impact goals are more likely to be realized where plans for them are made* (followed, of course, by the resources and monitoring to implement them); and not realized where no such planning is done (at least not in easily recognized or traceable form). Again from the Philippines case, and recalling the idea of an interlocutory mechanism of some kind: "incognizant of the uses and clients of research outputs, a mechanism for how the products may be brought into fullest utilization was not well thought of .... A producer who is not conscious of the market one produces for will unlikely conceive a market and distribution strategy." (Ibid:20)

It was perhaps not surprising that the Mexican project confirmed the point to the contrary. "From the very beginning, the research team made the application of research results its responsibility. This conviction helped shape most 'outputs' ....There was in this first research project, and continues today among members of the research team and *promotores,* a very conscious effort to use the products of their research and experimentation to effect changes in the quality of people's lives" (Wind/Sanchez:45). In much of this, plans appeared to have been realized.

D. Conclusion

By way of conclusion, the following table summarizes the key factors evident in each of the case studies in this review. The shading on the table is a very blunt way of summarizing the degree of impact each project has had; it should not be considered a summary judgement on the projects, but only to help further our discussion on the dynamics of the impacts of development research.

As emphasized earlier, factors tend to interact, and produce compound effects in the context of a

project. Moreover, a single factor may be critical to the reach and impact of one project, but produce only a negligible effect in another. Thus, the table can only provide an indication of how often each factor came up in the case studies, and what factors were present in each case.

In looking for trends within and across the cases, it is clear that the projects with relatively higher levels of impacts (Mexico, Nepal, Benin) have higher numbers of positive factors which broadened their reach and facilitated their impacts. On the other hand, the projects with relatively low impacts (India: Food, Guatemala, Thai: extension) had several negative factors listed, and those are in the key areas of research quality, the nature of the innovation and, each had a problem with the researcher not having an impact-oriented mind-set.

Keeping in mind the overall types and degrees of impacts that each project had, we can look across the factors table to see if there seem to be any patterns relating different factors to overall reach and impact. For instance,

- Personal motivations and mindsets: A couple of factors deal with the personal approaches and priorities of the people involved in the research project: motivation of actors and researcher mind-set. Quite obviously, the attitudes and approaches of the project personnel are key to the degrees and quality of impacts the project has. In two-thirds of the projects that had medium or high overall impacts, the motivation of key actors was noted as particularly positive in the case studies. On the other hand, a problem with the researcher attitude was noted in all four of the projects which had low overall impact.

- Planning for Utilization: Four of the projects seemed to have explicitly planned for the utilization of research results, including the three which had high degrees of impact, and one which had a medium degree. Of the projects that were criticized for not having planned for the use of research results, one had medium impact, one had medium-low, while the other three had low impact. Planning for impact seems to be an obvious way to enhance a project's prospects of achieving it.

The small number of project experiences used in this study make it difficult to trace many patterns in factors influencing reach and impact. However, this table could be modified to include the experiences of the other projects examined in other parts of the Evaluation Unit's study on the impacts of development research in other areas to draw out other broad conclusions and questions about the factors that facilitate or inhibit reach and impact.

- **Table 4. Factors Influencing Reach and Impact**

	Factors Influencing Reach and Impact	Guatemala: Water	Mexico: NRM	Benin: Bednets	Cameroon: Info	India: Food	India: Resource Costs	Nepal: Fisheries	Laos: Nutrition	Thai: Extension	Thai: Education	Cambodia: Health	Indonesia: TSFS	Philippines: NRM
pre-project	research design	×	✓	✓	×	×	✓	✓				✓	×	×
	assumptions behind goals		✓			×			×					
	design / goal congruence		✓	×✓	×		×	✓	×		✓	✓		×
	appropriateness of goals		✓	✓	✓		✓		✓	✓		✓		
	hreadth of goal									×				
	planning for utilization	×	✓	✓	×	×	×	✓			✓			×
during implementation	research quality	×	✓×	✓			✓	✓					×	
	IDRC input		✓		✓	×	✓	✓	×	✓		✓	✓	✓×
	duration		×		✓								✓	
	research management													×
	stability of personnel				×	×								×
	leadership (style)		✓	×										×
	host institution: infrastructure, capacity		✓			×			×	×	✓	×		
	opportunities for learning within process		✓	×	✓	✓		✓	✓	✓	×	✓	×	✓
	agreement on goals					×				×		✓		
	motivation of actors		✓	✓			✓		✓		✓	✓		
	stakeholder relations		✓			×	✓	✓	×	×		×		×
	stakeholder participation	✓×	✓	✓	×	✓×	✓						×	×

Factors Influencing Reach and Impact (Con't)		Guatemala: Water	Mexico: NRM	Benin: Bednets	Cameroon: Info	India: Food	India: Resource Costs	Nepal: Fisheries	Laos: Nutrition	Thai: Extension	Thai: Education	Cambodia: Health	Indonesia: TSFS	Philippines: NRM
	nature of product	×	✓×	✓	✓×	×	×	✓×		×	×		×	×
	product distribution		✓	✓×	✓×		×						✓	
	dissemination of results	✓	×✓	✓	✓×	×	×	✓		×			✓	×✓
after project	follow-up phases		✓				✓							✓
	buffer mechanism	✓	✓	✓	✓			✓			✓		✓	
	researcher mind-set	×	✓		✓	×				×			×	×
	being "out-there"		✓	✓	✓			✓			✓			
	institutional stability	✓	✓	✓×	✓	×	✓	✓	✓×	✓	✓	✓	✓	✓
	champion	✓	✓	✓								✓	✓	
overall	context	✓	✓	✓	×			✓×	×	✓		×	✓	✓
	readiness		✓							×	×✓	✓		✓
	push/pull factors		✓	✓	✓	×	✓		✓		✓			✓
	project mechanism			×		×	×	✓	×	×	×			

Legend

- Low impact
- Medium/low impact
- Medium impact
- High impact

✓ factor facilitated or enabled impact

× factor hindered impact

V. CONCLUSIONS

A. Background

This review was not intended to, nor does it, draw together all of the impacts which IDRC-funded projects have had. It has, therefore, not attempted to include a sufficiently large number of projects to be representative. Rather, the review sought to contribute to the debate about what impact is in the context of development research, and what the factors are which influence it. As described in Section II, this was done on the basis of data collected from a *small but purposive* sample of projects, selected across a reasonable range of the sectors, regions and types of research with which the Centre has tended to be involved. Two assumptions underlay this approach:

> (i) that it is valid to explore a concept such as impact through the lens of specific experience, even if that experience is limited in scope, as long as it reflects a fair mix of the overall set; and
>
> (ii) that such an exploration is warranted to the extent a clearer picture of the types of impacts IDRC research produces and the factors which influence their occurrence can make its expectations of projects more realistic and its capacity to encourage, facilitate and look for them stronger.

As evident from Section III, none of the projects reviewed produced magic bullet or dramatic impacts; most served more simply to move forward the capacity of people to know their environments better and, sometimes, to act in respect of that knowledge. None could be said to have "radically" changed the social or policy systems in which they applied; nor to have produced "significant" public good. That said, certainly some of what was produced as new insights or ideas, pieces of knowledge or skills laid the ground for moving toward such impacts in the longer term -- by raising questions about current practice, opening new avenues for assessing and addressing problems, and providing some of the essential knowledge and capacity to do so.

While many of the projects generated information or procedures which were probably objectively new in terms of their specific environments, newness appeared to be less important in terms of impact than whether the project was able to make enough of the right people care about it. A few - Mexico, Benin, Nepal - were able to do this; most were not. On the other hand, the fact that in every project there were individuals who took note and were affected, while again not dramatic, was not unimportant. As the essential unit of institutions and communities and as the carrier of ideas and maker of decisions, any one individual can immediately and in the longer term influence others. Unfortunately, few of the individuals who said they were influenced by the research had actually made specific plans or taken action to foster its reaching others; nor had many of the final and/or working documents of most projects been systematically or in tailored ways been made available to relevant user groups.

Question: These findings are important insofar as they suggest that the Centre cannot expect simply or necessarily to be presented with world shaking rewards as a result of its inputs. At the same time, the question is raised as to whether it could do more to look for and build on the small "enhanced potentials" for impact which were created? In collaboration with its partners, are there options for putting in place systems for seeking out the more subtle changes of emerging or cumulative impact; and of giving more explicit, concentrated and sustained attention to nurturing the reach and impact of research activities -- in the same way it does to their design and implementation in the first place?

B. Concepts of Reach and Impact

Reach and impact have been used in this review as discrete concepts: reach, from the perspective of the project, concerning to whom, how and how far the experience and outputs of its activities have travelled; and impact, from the user/beneficiary side, concerning whether, how and with what effect people or systems have changed as a result of, and in direct relation to, the reach achieved. The case studies revealed a range of both: of differences in people touched (reached) by research activities and difference in the degree and depth of the influence (impact). Thus, city planners in Pune probably became no more than fleetingly aware of the project's analysis of the status of street vendors, while the Lao researcher who left the Ministry was more profoundly changed by her sense of the mismatch between need for integrative food security policy and the system's inability to work this way. While most of those who were reached at all by the projects were somewhere in between these ends, the entire spectrum of potential users of most of the projects was not reached at all -- not, at least, in the immediately identifiable term.

It is the level of "profound" reach which is most clearly what one would hope to achieve. However, it is also important to allow room for a wider discussion of the population as a whole -- those for whom reach is less complete or non-existent -- in order to enable a greater refinement in thinking about what is happening; of what might be done to foster impact through strategies of reach; and of who needs to undertake such strategies. Reach and impact can thus be understood as two complementary, but counterpoint, perspectives, the processes of interaction between them then clarified in order to develop options for intervention on each side. Thus, for example, the preparation of user-friendly documents disseminated in accessible ways are matters of reach. Whether impact actually occurs, however, is a function of whether these documents are seen, internalized, acted on and this suggests different kinds of action required.

Question: To what extent can/should the Centre develop the criteria, procedures and resources for documentation in all projects and require their more systematic, consistent and effective application as a necessary condition for ensuring the potential for impact? In what ways can/should it take responsibility for promoting or facilitating actual use of research projects and their results, for ensuring that the potential for their interpretation into application is realized?

A very clear message from the case studies was that impact, as a concept, is a very subtle one; attempts to typologize it, are difficult. It seems fair to say, however, that the more internalized an impact becomes within a person or system, the less visible it is likely to be as an effect of a specific piece of research and its outputs. In the 3-strata project, farmers at different times picked up and

modified various parts of the fodder management system to suit their needs; impacts of the project were sporadic, partial and largely individual. In the Thai provincial education case, ideas about and commitment to decentralized planning appeared to have been reinforced through the research, but no action taken to make it happen; impact of the project was complementary to, and cumulative with, other interventions, indirect and largely intangible. In the Mexican project, impacts appeared in a range of categories: individual and community level, tangible as crop products and intangible as increased confidence; reasonably immediate as people learned to manage forest fires - and, perhaps, incremental if/as they applied these ideas to other environmental issues.

One assumption drawn from the review, more perhaps from logic than from specific data, is that as and if new ideas, attitudes, values and practices catalyzed by research become sustained in social (including policy) systems, as they wend their way through those systems, they will necessarily change and their origins become lost in the process. IDRC might have been able to "put its flag" on any of the immediate and tangible impacts realized in these projects; it can less realistically expect to do so with those which become successfully adapted, institutionalized and integrated over the longer term.

> Question: In a broad sense, the question is how IDRC can effectively prove realization of its mandate when, by definition, the more the research it supports achieves sustained impact, the less able - by definition - it is to identify the impacts and the role it played in generating them. It may be a matter of changing the criteria and the question: of looking for reach (over which it does exercise some control) as the enabling condition of (and perhaps proxy for?) impact and extend the period during which it is prepared to look for the latter. To what extent, then, can and should the Centre in its project planning -- perhaps at the level of the PI -- require the development of strategies to track reach and impact? Can this be done through monitoring procedures which both identify instances of reach and impact within the immediate time and activity parameters of the project itself, and also establish the indicators to be picked up in later "impact assessments" (using a variation of the case study design of this review, for example)?

C. Factors

As developed through the review, factors are those conditions or dimensions of a research project and its environments which appeared to influence the level, degree and type of reach and impacts realized. In themselves, the factors are intended to be without inherent direction, neither positive or negative in and of themselves. No one factor is considered in itself to be more important than the others; the significance of any one is determined by the influence it has in a specific case. Thus, there has been no attempt to give an across-the-board weighting. At the same time, none of them can be considered neutral or irrelevant. Rather, it is assumed that factors such as context, design and methods, management and participation will influence the outcomes and impact of a project in some way and that it is, therefore, important in understanding and guiding their realization that the specific nature of that influence be as fully as possible identified, managed and/or accommodated. Of all the factors discussed in the review, reach is probably the only one which can be considered a sufficient condition: unless the processes or products of research touch someone in some way, impact will not occur. Elements of all other factors will need, in some way, to influence reach, and through it, impact. Some of the perhaps more important patterns of how this influence applied in the case studies are suggested below.

Research tends to produce information and ideas rather than products or action. It is also an activity where the main actors involved are inclined to set clear boundaries. Researchers are often inhibited by the concepts, methods and expectations of their disciplines, and by the perceived opportunity costs of attending to application. Users, whether policy-makers or community members, are unlikely to jump easily into new thinking or behaviour simply on the basis of being told "it's better". Both the intangibility of research products and the tendency on the part of researchers and users to restricted visions tend to limit impact.

> Question: This situation is not immutable; people create the parameters of their action and then define this as reality. To what extent is it possible that the research circle, as it applies for IDRC, be widened through shifts in attitudes, mechanisms and institutional reward systems more likely to incline staff and their partners to think and act in terms of the utilization of their results or to engage users more effectively in application?

Implied through many of the case studies, though articulated in only a few, was the related question of the project mechanism itself as a factor limiting reach and impact. This was not expressed as a recommendation to get rid of the project as such. Obviously, some reasonably standardized and administratively coherent mechanism is necessary for delivering ODA funding; for ensuring accountability, projecting costs, managing disbursements and bounding the activity within time parameters. The project mechanism, as a punctual and delineated event, also recognizes the reality that donor-funded interventions are inevitably minor events in otherwise highly complex policy and development contexts. That said, there was a sense from the case studies that the project mechanism, by being time-framed and to a considerable degree deterministic in terms of activities undertaken, exacerbated the inclinations toward inflexibility and linearity suggested above. While it was clearly possible to make changes in any of the projects, there was little indication in any of the cases that significant changes were in fact made -- particularly with respect to taking on tasks such as identifying and working more actively with potential users.

> Question: When coupled with what also appeared to be a certain fixedness in research mindset, the case studies provided a reasonable base for asking whether the project mode might be inhibiting some of conditions required for reach/impact. Recognizing that some form of project delivery mechanism will always be required, are there ways in which its limiting features might be mitigated? The PI approach may already allow for this, either by design or accident, and perhaps could be reviewed in terms of how it is/could better be performing in this respect. In addition, should the Centre revisit its earlier experience with programme and institutional development grants or multi-phased R&D type funding (e.g. some 1970's education and agricultural projects)?

"Being there" has been suggested in various ways as a critical factor in influencing reach and impact. Most simply, and passively, it is a matter of duration: the longer a research activity goes on, the more opportunities there will be for different potential users to know of it and interact with its ideas. To some extent, 3-strata forage was an example of this. But sustained reach and impact imply processes of mutual adaptation between research and its environments, by both individuals and institutions. The more fully considered and purposive the process of facilitating this interaction or catalyzing this synergy is, especially through focussed effort at outreach, the greater is likely to be the range of identifiable impacts realized.

This suggests that research, therefore, should also "be there" in a more expressly active way. In

purpose and design, especially in a second phase perhaps, projects need to be geared to engaging user communities and translating findings in terms of the contexts and languages of those users. One of the case writers recommended a "cafeteria" approach to dissemination, for example: results of the research produced and distributed in a variety of formats, small-scale, accessible, user-friendly, dispersed over time, to a variety of users. The idea of a buffer or mediating agency is also relevant here. Advisory committees, networks, NGOs, think-tanks are examples of this buffer idea, a "conceptual" designation assigned more by what the agency does rather than what it is. Several of the case studies recognized the need for such a role: of drawing on the accumulating ideas of research and moving them across the research-user divide.

Finally, the idea of "being there" relates also in its broadest sense to the notion of persistence. This is an issue with a long history of debate within the Centre, as research areas, programmes and themes have come and gone. Concerns of premature closure were raised in several ways by the cases with respect to changes in programme staff, failures to fund second phases, lack of PO initiative in helping to make cumulative links among projects of similar focus.

> Question: The Centre appears to have done most of its impact work at the first, more passive, level. More sporadically, though often very effectively, does it seem to have pursued the second -- especially through some of its networks. The third continues to be problematic. To what extent are the current PIs able to provide openings or mechanisms for enabling more active involvement with user communities, with better persistence and wider, more sustained outreach, than single one-off projects? Related as well to the issue of being there was the suggestion from the cases that the nature of the research product itself needed to be better considered in understanding reach and impact from the users' perspective, especially with respect to making them more accessible (divisible, manipulatable and adaptable). This implies certain questions: whether in research planning more accurate assessment is needed of the usability of outputs expected; of how to make them accessible; of what researchers need in order to allow results to be undone, recast or only partially implemented to fit users; of how to ensure *fundability of* research projects which, aimed usually at realizing the perfect result (the most tightly defined argument, the strongest cause-effect relationship, the sturdiest technology) begin to plan for more modest outcomes and engage in formative negotiation of results?

From the experience reported in the case studies, reach and impact appeared much more likely to be realized or not on the basis of accumulated details than from any single and major event, input or gap -- of policy-makers not consulted, of the complexity in report presentation or use of inappropriate language, of changes in management, of not recognizing the difficulties posed by an integrated research design in a vertically structured context. One important implication of this is that development research needs to be modest about the degree of change it can or should try to effect on a national system. An agency like IDRC is likely to be more effective as catalyst, facilitator-enabler or broker than manager. It is a situation which also makes monitoring for reach and impact opportunities especially critical, and difficult. It implies looking for impact in possibly different terms; as partial, intangible, or "collateral" (this last, for example, where the project serves as part of a string of activities which cumulatively produce impact, but where the individual outputs may never be able to be disaggregated and, on their own, would probably contribute very modestly if at all). Partial outputs recognized early in a project, lessons learned or relationships identified can be fed back and strengthen ultimate effect. Opportunities to engage potential users during implementation can help them see, and create, benefits along the way, and to establish ownership

in the process. Data collection and analysis strategies, where identified as useful innovations, can be incorporated into in-service researcher training materials for the project, and concepts generated through on-site monitoring, if the project is flexible, can serve to open up the design to include more and broader dimensions. All of these can serve to strengthen reach and impact in ways far beyond the more narrowly knowledge generation goals of many projects.

> Question: Are there ways in which the rewards for such monitoring can be made more compelling, and the costs lower, for programme officers, for the Centre's administrative systems, and for project recipients? To what extent would it be possible/useful to structure such activity around the case study design used here, focussing on the identification of factors which influence impact and how these might be enhanced or eliminated? What are the implications for discovering or generating reach and impacts through such systems - are they all positive?

D. Reach/Impact through the Research Cycle

An IDDR-SSD report in 1986 concluded that research must either "deliver a large shock to the system", or "persist over the long run", if it is to have effect. Two factors impede realization of either recommendation. First, as noted above, IDRC projects have not as a whole persisted; three years appears still to be the average length for most projects and few have multiple phases. More importantly, on the first recommendation, policy-makers tend not to appreciate shocks. People and institutions are disinclined to accept recommendations which imply major dislocation; which require not simple technical revisions, but fundamental rethinking. While shocking results may get their attention and stop forward motion for a while, such immediate impacts will likely not last long. Sustainable change requires reflected, usually variable and step-by-step action; it requires calculating and managing risk and making appropriate adaptations.

One question for the Centre with respect to realizing sustainable impact becomes, then, how ready it is really to take up the above recommendations; how deep its commitment to impact goes in terms of being ready to undertake actions to address the factors which appear to enhance and impede it. Should a capacity and requirement to deal with reach and impact processes be included in programme officer job descriptions, for example? In criteria for project development and monitoring? In the scheduling of impact assessments? What options are there for reconsidering current mechanisms and/or creating new ones not just in terms of allowing for, but also encouraging and facilitating, reach and impact? What potential is there for comprehensive research environment studies; for making major in-project changes in design or participation; for design of umbrella or phasing strategies which might mitigate the limits of the project mode?

Reach and impact can and do happen at all points in the research process; both will be better fostered the more they are thought about, sought out and facilitated. This last section discusses some specific issues, at each phase of the project cycle, as they relate to reach and/or impact and how they might be better addressed.

a) Project Development: The ability of IDRC-supported research to realize outcomes and impacts is influenced by both the character of research itself and the fact of its happening in often turbulent

national development, policy and institutional contexts. Most of the case studies either said or implied that there had been little if any thought given by the projects to the breadth or nature of the research use or impact "context". Few analyzed well either who would/might need to be involved, or their levels of readiness (what they would need to know, have or do to be reached). It was clear also that few had considered the availability of, or need to create, connecting mechanisms of some kind -- agents to help interpret results between research and users. Nor did there appear to have been much assessment of the degree of complexity or change implied by the innovations expected from the research. In brief: there was not a great deal of attention paid to factors of context, or to the place of the research initiative within that, with respect to use and usability of planned products.

> Question: would there be value in reintroducing some form of the Centre's earlier experience with "research environment" studies, focussing in this case on those factors likely to influence impact: the context (push/pull, readiness), goals (clarity and concurrence, applicability to the problem, congruence with methods), and anticipated resources (finances, leadership, institutional capacity, motivation) etc. With the development of the PI/prospectus approach to planning and managing broadly based fields of research, is there better scope for such reviews serving needs assessment and planning ends for more than one project, thus increasing their cost-benefit? Such a review may lead to decisions to recast, delimit or even drop a research activity determined as at odds with its user-context. It is also possible that the act of going through such a process, in collaboration with researchers and at least some of the potential user/beneficiary community would in itself enhance the reach and impacts eventually realized, of course.

b) Project Planning and Implementation: Most of the projects reviewed gave little evidence of specific planning for, or monitoring of, reach and impact. Nor were there, in most cases, specific efforts made to establish and maintain contact with users or to encourage their responses to the exercise as it progressed - to track and facilitate congruence, concurrence, understanding, appropriateness, mitigation of perceived risk. Ensuring continuing motivation and engagement of research staff themselves was an important issue in several projects: where they were evident, also evident were some of the most significant instances of reach established and actual/potential impacts realized. At its most basic level, impact planning requires laying the ground for it -- through identifying and developing mechanisms and strategies for engaging user communities in on-going and progressively broader ways, in preparation and application of systems for distributing outputs of research in concrete form: publications, a-v media, computer programmes, training/application manuals; in inviting and enabling feedback on the use of outputs/documents; and in making the links to potential intermediary agents.

> Question: would there be value in the Centre's developing sets of guidelines or criteria, based on factors such as those identified here or others, for each of project planning, design and monitoring? Following something of the format of the Centre's work on institutional assessment, these could be developed/used by IDRC, researchers and users. It would presumably also be important that they incorporate perspectives of any administrators in the implicated institutions -- to enable a workable balance between the levels of open-endedness and flexibility implied by a user focus and the requirements for accountability, reporting and disbursement.

c) Project Conclusions: Only a few the projects, as evidenced from the case studies, took concrete steps to follow up either reach or impact past termination. The exceptions were those in the Philippines, Nepal, Benin and Mexico and each of these in different ways. Only land use/Philippines did so with the involvement of IDRC, through development of a further phase. Without input from

the Centre, Nepal continued the general line of work as part of the work of the department; and the research team in Mexico evolved its own permanent structure within its referent community. 3-strata forage/Indonesia, in a sense, continued to be observed in its spread (through NGOs and government) by the university research team, but without the latter's development of its own programme expressly to foster impact. Several of the case studies noted as unfortunate in various ways the loss of IDRC attention before sustainable reach/impact could occur -- sometimes the result of change of Centre policy and/or programme staff; sometimes, it appeared, more simply because it was the end of the project.

> Question: What would the value and feasibility be in building into each project the 6-month post-project period suggested by the South Asian case study experience, as a means of focussing on and enabling fuller reach? What scope does the Centre have in making the explicit switch of perspective and activity implied by the need, in this, to concentrate on analysis of the user community: who, how, with what mechanisms etc?. What would be required in additional human and other resources, given the different types of agents, activities and skills implied? In addition, what are the options for the Centre developing a schedule of post-project impact assessments (perhaps on a randomly selected basis)? Done 5-10 years following completion, would such a series likely be cost-effective in providing a useful pattern of reach-impact typologies or in enabling the Centre to track better its effects as a development research donor.

All three elements are obviously related. The more thorough and participatory the work done up-front, the more focussed and effective is monitoring likely to be, the more user- or reach-focussed and interactive the mechanisms and processes of implementation, the more user-tailored the outputs and the more accurate later impact assessments.

E. Final Points

At some point, the link between initial research and eventual change will become diffuse enough to be considered peripheral. Individually, any one project may or may not generate important impacts. Cumulatively, it is perhaps the existence of stronger research capacity in a country or sector, and the valuing of the research process and of the knowledge institutions which create and sustain it, which are the fundamental impacts of IDRC's activity. At some point, therefore, it may be necessary to fall back on an assumption of research, like education, as a public good; a necessary element of the knowledge base of any society in sustaining itself, but to a large degree unmeasurable. That said, it is not impossible to gauge, as the cases how -- and might have been gauged better had there been more time to follow the paths.

And it is far from unimportant that such an effort be made. One fundamental issue for *development* research is that while chances of impact may be limited, they are there and can be negative: dependence, unmet expectations, people and institutions making commitments to changes which are not followed up. There are consequences when the Centre pulls out before sufficiently ensuring a level of sustaining capacity: of orphaning a project, of deciding against further phases, of not acting enough or at all as broker or link to other resources, of not attending to the intangibles of learning. The hands-off approach of IDRC was appreciated, seen to be politically and culturally appropriate,

showed proper respect for local capacities. It also created operational difficulty and perhaps limited the effectiveness with which problems and gaps were handled. Balance is critical in determining the level of IDRC intervention, assuming that support for development research and its impact means more than the simply allocation of budget. Monitoring is key, but so too is establishing at the outset that a relationship is a partnership, and that that partnership includes all of IDRC, including its administrative functions, the researchers and their partners/clients.

to come" -- should anyone bother to ask the question.

Based on the data of the thirteen projects analyzed here, in addition to several interviews and reviews of other case materials[1], impacts realized from IDRC projects can generally be described as:

*more likely to appear mundane than profound, found in the details of incremental change rather than in major changes to the whole;

*ranged along a continuum from fairly concrete (reductions in incidence of malaria) to essentially abstract (appreciation of the value in decentralized planning);

*more clearly evident within the parameters of the project than in the wider environment (at least insofar as it was possible to track them);

*most consistent and striking at the level of the individual, alone and in the context of his/her institution or community (rather than in the system or society generally); and

*more significant in their potential for future influence than in immediate changes actually made.

These results imply that, while IDRC projects can and do make a difference, this difference is going to be more often cumulatively complementary than singularly dramatic. They suggest that attempts to trace, identify, measure and display impacts will inevitably be an uncertain and far from simple undertaking. The following discussion hopes to provide a way into this process, however, by looking at the factors which appear to influence realization of impact -- in order, from there, to know better how and where to look for, encourage and, in some cases, advertise it.

Reach: A Necessary and Sufficient Factor?

Reach, as used here as a factor in understanding impact, is somewhat unique. Of all factors discussed in this section[2], it is clearly the "most" necessary and the only one which is -- to a degree anyway -- sufficient. Reach, in its broadest definition, refers here to those individuals, institutions, communities who are in some way and at some point "touched" by the research process. This can be in a fairly fleeting and largely inconsequential way; someone is simply made aware of a study's conclusions through a document received or meeting attended. But reach can also be profound; someone changes fundamental values or behaviour as a result of participation in the research or exposure to its

[1] particularly from the Southern African cases, also funded by the Evaluation Unit

[2] "reach" is still evolving as a concept in the Evaluation Unit. On one side: is reach another term for impact (i.e. those reached by research are those who are actually changed by it). On the other: is it a means to realizing impact (i.e. the way research outputs are brought to the attention of people whose reaction to them constitute impact or lack of it). For the purposes of this review, the latter meaning has been used -- as contribution to the deliberations.

findings.[3]

It is **the** critical condition in any consideration of impact because it is only through its ability to reach users and beneficiaries that research can have impact. While presumably self-evident, establishing reach, and even having the prerequisites of recognizing and valuing the effort and of knowing how to do it, were neither common nor strong features of the projects reviewed.

What was clear from the cases was that the more ephemeral the touch, the less likelihood there was of realizing anything which might be labelled impact at all, and the more limited was any impact which was produced. While in all of the case studies some reach did occur, most noticeably it was to the researchers themselves, and sometimes to their institutions. Where it occurred beyond the project, it was chiefly to the people who, within the general environment of the project, received documents, attended workshops, became part of field-trials, received training. In several of the projects, reach went beyond these parameters into policy-making systems which, it appeared, listened to the message, if not necessarily applying it. A few projects were able, as well, to communicate their results internationally, to other donors, through networks and within overseas research institutions and sectors.

Whether and to what extent any or all of these outreach activities had an impact on the concerned users/beneficiaries was not fully clear from any of the studies. In part, this was a function of the time and budget limits of the case studies; questions did not go much beyond a relative few in most instances, and those in the fairly immediate vicinity of the project. More problematic, and important in the longer-term, was the apparent near-impossibility of ever being able to know the full extent to which the ideas, information or products of any project might travel, across time as well as distance; or to what degree they might change in the process of getting there. The adaptation of innovation by users is considered by many a key tenet of sustainable change.

But "being there" with the products of a project -- reaching users -- does not guarantee impact. Thus, for example, in the Philippines case "...having contacts with GOs and NGOs or having policy makers in community dialogues, cannot be presumed to have influenced or created an impact on policy making or implementation"(Buendia:22). Indeed, in this case, the project had no apparent influence on policy. Hence, the importance of managing the reach process in terms of reach: of considering questions of who is and should be reached; of the types of other factors which might intervene to facilitate or impede that effort; and of how to ensure that the conditions supporting broad, lasting and effective reach - and thus impact - are in place.

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[3]Reach does not require the person actually to be conscious of the exposure, however. Those affected, perhaps significantly, by the results of a SAP policy formulated through policy research are in a way reached, because the impact is felt there -- and should be measured in those terms as well as from the perspective of the policy-makers who consciously used the results. This differentiates those reached as active decider-users of research, from those reached more passively as targeted "beneficiaries". It is an issue of the ethics of research intervention to which, the review suggests later, more thought deserves to be given.

B. Factors

The factors to be considered in the rest of this section are those situations, resources or conditions which influence how a research activity is formulated, executed and disseminated; and thus, the reach and impact it has. They are many, especially in the sense that any one seems to have a number of permutations. They also tend to be interactive with each other and, in some cases, with the research itself. Far from isolated, though they may be conceptually discrete, in practice factors seem invariably to interlink with one another, sometimes as cause and effect or collaterally, with one positive (or negative) factor conditioning the next[4]. In this way, though a specific factor may prove to be *necessary* for research to achieve reach and impact (towit: impacts are much less likely to happen where research quality is considered poor), few if any (except perhaps reach) will be *sufficient* on their own to ensure that the research succeeds or fails in making a difference. At the very least, and this was confirmed by the case studies, those immediately involved with the project are presumably touched by it and sense some influence from it, whether positive or negative.

The factors analyzed here have been arrived at, for the most part, deductively, on the basis of patterns derived from the case studies. Recognizing that the life and legacy of each project are made unique by the particular confluence of people and circumstances involved, certain generalizations can nonetheless be drawn as to the "types" of issues which influence the experience of most, if not all, of them. It is, the review suggests, important to take such issues into account. By being identified and/or anticipated, and assessed with respect to their being positive or negative in their influence on their own and in combination with others, actions might be taken to accommodate, compensate, facilitate or eliminate them.

B/1 CONTEXT

> There was no funding for a second phase, so followup is difficult. You know that the Cambodian government has almost no money for operations, so it is difficult for us to fund separate activities by ourselves. I am trying to obtain government funds, however. I am responsible also for public health training programmes at the Medical School at the University of Phnom Penh, so I am trying to use the techniques and the information developed during the IDRC project for training at the University. I have had the IDRC training manual translated into Khmer by (a local NGO). IDRC paid for this. This is necessary for training district-level staff, who cannot read English. We are using three manuals - a Teacher's Guide, a book on Basic Epidemiology, and a book on Health Research Methodology. WHO is funding the translation of this last one, and the Government of Cambodia will print them all. We will distribute all of these materials to the provinces and districts by the end of 1997. So, I think this is some followup, and it has been useful. Also, as a second step, we hope we can get funding for workshops at the provincial and district levels, where we will use all of these materials. (Project Leader, Health Research Capacity/Cambodia).

Probably the most diffuse and internally complicated of all the factors which influence the implementation and effects of research is context. As a factor, or dimension, context recognizes that research projects take place within **multiple environments**: physical, socio-cultural, economic, policy, institutional (domestic and international), developmental, sectoral, disciplinary. Any and all

[4] For example, a constrictive institutional culture impeding open communication of research innovation across sector lines; in consequence, limiting the testing of the ideas in different contexts, fostering defensiveness in the researcher unit and making unlikely any systemic change and less likely further research ventures.

of these environments, in turn, will exert an influence on why a project is done and by whom, how it evolves, what it accomplishes and for whom - and thus its reach and impact.

In influencing any part of a project's life cycle, context influences the whole. In countries like Cambodia and Lao PDR, for example, this inter-connectivity was painfully clear: almost no domestic budget, limited human resources, minimal institutional infrastructure, significant health problems and no research capacity or health "system" all interlinked to make the likelihood of extending and applying the outputs of the research-cum-training experiences - even a relatively successful one in the Cambodian case - barely tenable in the longterm. Need for foreign trainers, for basic language and research paradigm interpretation, for linkages with other donors all served to define the way the projects were done. The better the match between these context factors and the training design (another factor), the better the results; but the even the modest hopes expressed by the Cambodian project leader in June, 1997, collapsed under the weight of the "events of July" of that year (the ouster of one of the co-Prime Ministers by the other and *inter alia* the subsequent hiatus in donor funding).

Context in its various dimensions (and like all the factors discussed here), acts to impedes and facilitate the ability of the researchers to manage the study, and of user communities to engage with it in different ways. Its varying components can influence motivation for the study, its topic and methodology, the constraints on doing it and the advantages it achieves. Context issues are often complex in themselves, of course, but their complexity is exacerbated by their being also interactive - e.g. international pressures influence what research recipient institutions will be interested in; their domestic policy environments will affect what they can do, and vice-versa. The research projects reviewed here appeared to realize better reach and impact the better they were able to achieve **compatibly or congruence** with their environments: accurately to know and assess the opportunities available and the needs to be filled; and, accordingly, to orient resources and activities to them and tailor their relationships with them.

One dimension perhaps useful to understanding how the context factor works is that of *push and pull*. A country's development status and the nature of the "problem" within that, for example, can push the research in one direction rather than another, and help it achieve influence[5]. Thus, while some projects in the review appeared to have had no strong rationale pushing them to be done, no one anxiously waiting for a solution (e.g. Pune), for others, the problem was clear and compelling (e.g. Mexico). Even where research is prompted by problems acknowledged to be serious, its findings may result in little by way of change in policy or practice (e.g. Philippines). Seriousness is not, it seems, a sufficient condition for enabling research impact. It appears to be necessary that someone actually care about the issue, and know how to make the seriousness "real" before much happens.

Other contexts can pull toward the doing of particular research and its application. One important element here appears to be the nature of the policy environment: a strongly articulated policy in

[5] Context can also push against certain research. Some problems, openly acknowledged as critical (whether/how corruption across the Thai-Cambodian boarder is influencing impacts of donor investment, for example), may not be much pursued as topics of research because they are difficult, dangerous or unlikely to lead to implemented recommendations.

favour of the ends being sought by the research tending to be coincident with greater reach and acknowledgement, if not necessarily actual application, of research results. According to the review of Southern African projects, "...(those) which successfully led to the formulation of policy [as an impact] at a governmental or institutional level were executed in an environment and at a time which was conducive to policy change and involved organizations with strong links to the relevant policy makers" (Motsi:9)[6] The former director of the Thailand Development Research Institute/TDRI, interviewed for this review, also acknowledged the powerful role existing policy "need" can have: in this case, a senior researcher was able to influence a major government decision in 1997 to float the currency <just by presenting the case in a newspaper column>, a case built on multiple research results, of course, and a researcher with a <high profile>, but also to a period of serious financial crisis and policy indecision in the country.

The bednets/Benin project was strong, in part, because it had both push and pull: an obvious and extensive "burden of disease" crisis in malaria incidence, as well as pro-bednet anti-malaria policies at national, regional and even international (donor) levels, NGOs ready to take action and a recipient institution with whom the government had expressed willingness to collaborate. The Cameroon rural communication project, rather less successful in realizing impact, also had some of both pressures. Here, though, the benefits of push, from critical levels of rural poverty and social unrest, and of pull, from mobilized communities seeking to establish greater control over their lives, were mitigated by a less-than clear or immediate link between them and the project's approach for addressing them: increasing the availability and quality of socio-economic and agricultural information. In consequence, then, final impacts of the project were limited by other factors: project design, goals and processes. Context appeared to provide neither push nor pull for the food vendors/Pune project, impetus for the research seeming to have come from the researcher and IDRC. The numbers of vendors in Pune, their conditions of work and the quality of their product were not considered critical. Nor were policy positions or expressions of public interest available to mobilize generation of information or to use that information which became available, despite its apparent quality.

Push and pull dimensions of context such as these are probably less amenable to mediating action on the part of the project than others. Few projects can actually create a more enabling policy environment, for example. Nevertheless, they are elements to be taken into account in determining whether it makes sense to begin a particular line of research; who the partners should be and how to engage them; and where and how to focus dissemination efforts.

Context also enables and discourages research reach and impact by the *type, quality and stability of structures and infrastructure* it provides: whether the financial, technological, institutional and regulatory systems necessary for application are available and are conducive to what the research seeks to achieve, or whether they act to impede it. This dimension can be understood in both very broad and quite narrow terms. At one end of the continuum, one factor in giving the Thai provincial education project influence appears to be its having come out of an existing, generally pro-decentralization, policy arena; and because the system had already undertaken projects aimed at institutionalizing the concept. The IDRC initiative had something to build on, and then into. In much the same way, the effect of IDRC's relatively modest (albeit sustained and not, by IDRC standards, small) input to the Nepal inland fisheries project became significant in large part by being collateral

[6] <...> indicates paraphrased comments from interviews

and cumulative, set within a context of multiple donor funding, much of it complementary and with established collaborative links among their professional staff and IDRC's.

At the other of the continuum, a context factor in street vendors/Pune's applying none of the recommendations for better hygiene practice, despite some training, was the absence of infrastructure, directly and indirectly: "...a lack of adequate facilities in terms of water supply, space, garbage disposal etc. Preoccupation with the daily issues of survival...was (also) cited" (Bajaj-Pune:5)

On the hand, of course, the Philippines land-use research failed to achieve impact <u>despite</u> a potentially conducive policy context (of on-going public consultations on a new Indigenous Peoples Land Rights Act) because the researchers and policy actors failed, on their respective parts, to engage with each other. According to an organizer of those consultations, had the committee known about the study, the researchers would have been invited.(Buendia:14) From the perspective of IDRC staff involved in ph2, however, the researchers equally complain of the government's lack of interest in their work, considering it too academic. Once again, no factor (it seems) acts independently or definitively to determine impact - in this case, the gulf between research and policy paradigms, or concerns about protecting their separate relations with the community, intervening variables.

Related to, and probably influencing, structures is the somewhat more subtle factor of *culture*, of the society in general[7] and, more importantly for policy research, of the bureaucracy and its relationships with its client and research communities. In the Lao case, for example, major systemic impacts from research will continue to be limited, perhaps fatally so, to the extent research projects - like most other international interventions - are kept at "arms-length" from the domestic workings of the system; and as long as the policy-making culture actively discourages horizontal collaboration and sectoral integration. More promising for the Thai case, on the other hand, is a policy context which persists in articulating the merits of decentralization against the odds of still-strong tendencies toward centralized control and restricted cross-system communication. Related to the factor of "lag-time" in realizing and measuring impact (discussed below), contexts do change. While the effect of the project on provincial education planning was barely felt at the time, synergistically with other such initiatives its influence has helped keep the concept alive and likely now to bear fruit with the emphasis of the new Constitution on local-level decision-making.

The *implementing institution* itself is appropriately considered as a factor of context. What any research project looks like or produces is necessarily a function of what its recipient implementors (including IDRC)[8] bring to it in terms of history, leadership, staffing and mandate priorities; financial stability and credibility; and the ways in which they interact with their various political, institutional and user environments. The influence can be subtle. For the Cambodian project, the fact that neither

[7]The culture of a society may be more or less inclined toward, or tolerant of, the generation and use of "scientific" analysis, for example, depending on the ways in which knowledge is handled - who controls it and how; what sources of ideas are seen as legitimate. None the case studies specifically addressed this issue, but one perhaps usefully explored with respect to strategies of reach and expectations of potential impact.

[8]For IDRC, the fact of so many references to project "orphans" in some form, and the influence of this on the eventual success of those activities in output and impact terms, indicates the role that shifting agendas can play.

partner had strong English capacity, but had to use this as the common medium between them, proved a mixed factor with respect to impact. As might be expected, it was negative in denying trainees full value from the experience; it was more serendipitously positive in providing the opportunity for both to improve their language skills and open respective doors for each in the delivery of, and participation in, future training programmes.

The switch in the Ministry of Education's executing partner in the Thai provincial education project was clear and positive, considered to have made a "significant" difference to the range of participants involved in the activities and what they achieved: "...it broadened the scope of the project from concern with primary education planning to a concern with planning in a number of education sectors" (Armstrong-Thailand:4). As a policy research institution, the new partnership also provided the opportunity for establishing a relationship between policy analysis and policy development/programme delivery, one which has endured as an unexpected impact: <we did not know it would happen...Whether the project led to more decentralization is something we could not say for sure....but we can say for sure that this project led directly to closer work, even after the project, between (us). Before that, we did not trust each other> (MoE officer).

Institutions are also, and most clearly, a core dimension of context with respect to the *kinds of people* they bring to the research effort, and *the ways in which those people are allowed and choose to interact*. According to the ACE/1997 Report, "...organizational structure and leadership appear to be an important determinant of the success of multi- or inter-disciplinarity....(in) having structures which cut across sectoral lines and inspired leadership which is able to deal with the challenge of bridging gaps."(6) A point in general confirmed by the cases, leadership stood out as key. Not surprisingly, projects which were competently done e.g. realized their objectives and/or achieved impact, tended to be those with project leaders who had status, professional capacity and credibility within their institutions; who were committed to fostering its development; or who were able to make contacts and draw on networks to promote research results. Where these characteristics were missing, the capacity of the project appeared to be weakened, whether to produce technically good research, or to reach out to potential users through its implementation and its products in ways which might have fostered impact.

In the Pune case, for example, a technically competent researcher was hindered, at least in part by not being a member of the research institution, in situating the research in an effectively user-focussed policy context or, once done, in moving it into the hands of implementing organizations. She seemed unable to draw on or help encourage its networks of contacts, or to pursue ideas for application.

On a different dimension of leadership, the lack of inter-disciplinary research experience of the core research members in the Philippine indigenous land use project produced a similarly limiting effect on eventual impact. The informal get-togethers went some way to exposing the affected parties to the need for a more integrated approach, but these seemed too little and too late to enable the team to establish a common understanding of research goals or create a fully collaborative methodology. In addition, this lack of on-hand experience, the time and energy spent on dealing with the antagonism arising out of failures on both sides to accommodate it, and the resulting mismatch with IDRC expectations, appeared to have direct influence on the collateral failure of the project to recognize and take action on the potential users of its results. Who in the policy and peasant

communities needed to be implicated if the analysis were to produce changes in the legal systems or land-use practices related to indigenous areas was a question simply, it seems, not addressed.

On the other side, enthusiasm and commitment on the part of the institution and its research staff appeared to be a critical factor for the costs of under-nutrition/Dharwad project, in the quality of the research completed and in the steps taken to reach out to (at least) fellow academic and economist users. Showing the interactive nature of factors, this mobilization was, in turn, a result of the institution's position within its wider environment "... a relatively new institution in need of establishing a track record professionally and of consolidating itself in terms of resources and infrastructure....to prove its institutional credibility." (Bajaj-Dharwad:2)

This example raises another dimension of the context factor with implications for research impact: that of institutional, policy, social *readiness*. As in any learning event, key to the success of the experience is the readiness of the individual(s) involved to engage with the process, to participate in a way which allows them to be open to experimenting with new ideas and to risk losing established ones, and which provides them the skills and knowledge necessary to move forward. To the extent that paying attention to, engaging with, and ultimately using the ideas, products or processes of research is a learning venture (which in most cases it is), the state of readiness in potential user communities is important to assess and, where absent, to try to create as part of the project activity.

Readiness as a factor (or dimension of one) is immediately relevant to policy environments and institutional capacities insofar as it concerns whether or not there exist the attitudes, skills and resources necessary to, on the one hand, support and conduct the research, and on the other, to care about its results. In a related way, readiness also concerns the ability of research and policy communities to "speak" with each other (an issue discussed in more detail further on). The biggest obstacle to realizing the decentralization of policy aims of the Thai Provincial Education Planning project, for example, <...was control of resources. The project recommended that there should be a lump-sum payment made to local planning agencies....But the government never responded to that, because they wanted to control the resources>. At least at that time, the system was not ready.

Alternatively, the policy environment in Cambodia, reflected in the enthusiasm of the Minister for the type of field-based research training to be given, was much more conducive to the realization of the objectives of that project: <Because the Minister supported it, we had people participating who were very senior, from other offices in the Ministry. They could see this was a priority and it was easy to get senior people to participate. Also, because the Minister supported it openly, it was much easier for participants to get time off, and to get cooperation when they went into the field to collect data>. Adding to this mix, was the readiness of the two partners: of the Khmer director to apply the experience of his own past training within his institution, and of the Thai team to apply the experience gained to building the capacities of theirs.

Readiness also affects how an innovation is interpreted by different potential users, or what they perceive to be its key characteristics. The particular value of the results of the 3-strata forage project for the local government officer who "expressed full support for the TSFS initiative" was its potential impact not on agriculture, but agricultural tourism: the forage plants, it seems, had

invitingly "regreened" the area. Little by way of enthusiastic policy support, perhaps in consequence, has come for the application of the system-qua-system as a means of improving farm production.

The Mexican project provided a nice example of the importance and scope of the readiness concept; of the idea that the nature and quality of a research project intervention - as an intervention of necessarily limited duration, resources and depth - will succeed even with a very complex innovation and ambitious and ambiguous goals, if the context is "right". In this case, it was a context with clearly serious socio-economic and environmental problems pushing them forward; and with the pull of researchers professionally competent to deal with the problems and link effectively with the affected communities. Perhaps most important in terms of enabling impacts, there was the further pull of an already mobilized body of potential "users":

> (Independent peasant organizations had already begun) to multiply and coordinate their activities at the national level....(These) organizations and advisors - often scientists and non-government organizations - have evolved over the last two decades in their knowledge, their thinking and approaches, increasingly emphasizing the absolute necessity to address the reconstruction of the natural resource base in order to alleviate rural poverty....The (research organization's) work is also not unique, but a reflection of the historical changes taking place....*(It) forms part of a movement from civil society that demands a more just* and accountable governance, providing coherent alternatives... (Wind/Sanchez:14,18)

While more will be said about this issue later, readiness also concerns the capacity of the research agent (whether research institution or operational unit) to take the further steps necessary to move the results or products into useable form, and to sustain them sufficiently long for them to "take". Capacity here includes the knowledge and skills needed to translate the research products into useable form, whether these be ideas or technologies.

One very clear example of this was the case of the bednets/Benin: the ability of the project implementing organization and its production unit to continue to supply the product, monitor use, re-impregnate existing nets and cope with currency fluctuations will determine in a major way the longer-term impact of the technology on malaria prevalence in the country, and perhaps the region more generally. Capacity includes also being ready and able to know and to care about the situation (needs, priorities, mandate, resources etc) of the potential users; to move out of the producer-sender mode of the research paradigm and cross to the other side, to that of the user-receiver mode of the implementation paradigm. But again, this factor did not act in isolation. In this case, the influence of the research paradigm with respect to who were considered legitimate players also appeared to have had a role.

B/2 THE PROJECT

Design

The design of a research project is relevant in a number of ways as a factor in its eventual reach and impact. It is in the design that the basic assumptions of the research are reflected: in what data are considered important; in what methodology is used - including nature and extent of any involvement with the beneficiary and/or user communities; and in what human and financial resources are allocated, and how. Research designs define the nature of the problem in operational terms: whether it is to be, in the main, one of information gathering and/or knowledge generation and for whose or what purpose; one of attitudinal and/or behaviourial change and at what level (individual,

organization, system); one of technology development and/or application; or one of strengthening research capacity. None of these are mutually exclusive, of course. Based on the set of projects reviewed here, knowledge generation and capacity development are common to all IDRC projects, at least to some degree.

The issue of *assumptions* in this context is especially important; an element relevant to all aspects of a project, but one rarely articulated and therefore, it seems, rarely monitored or tested. Raised explicitly in the costs of under-nutrition case study, but common to all, was the apparent failure of the project to account adequately for possible "breaks in the chain" of logic: between the identified problems and their causes; and between these and the means to solve them and the focus and role of the research exercise in that (Bajaj-Dharwad:8). Assumption chains are particularly ambiguous in policy studies; contents here are often fairly abstract and their impacts realized largely in terms of their capacity to convince rather than compel (as opposed to the more 'provable' value of visible products, such as the new crop variety in Mexico. Results such as these, where the design is right, can stimulate reach and impact through almost a self-sustaining feedback-loop mechanism)[9]. In the assessment of the Dharwad project, there appeared to be not the direct line assumed between availability of an economic analysis model and policy-makers' readiness to use it. Impact was limited here, in part, because the connecting focus "on creating a constituency for such studies" was missed (Bajaj-Dharwad:9)

Following logically from this, the concept of *congruence* is one shown from all the case studies to be crucial. Congruence, like context, is effectively a factor-of-factors, referring to the degree of fit between the design selected (in all its aspects) and elements such as the nature of the problem to be solved or issue to be addressed; project goals and objectives; the people expected to be influenced by its results; and the context in which these people find themselves. As elaborated later in this section, the most common tendency across all cases, and especially those which fell short of their output and impact goals, was a function of incongruence: underestimating and failing to match the complexity both of the innovation being attempted or generated through the research (whether idea, practice or technology) with the degree of commitment, learning and change required on the part of users to make that innovation real and to sustain it. In consequence, the design and resources appeared to prove inadequate to the task.

Somewhat self-evidently, output and/or impact goals are more likely to be realized if the specific human and financial resources, methods, activities or time-frames necessary to allow and enable them are adequately and relevantly accounted for in the design. Often, however, they are not. In the case of the bednet research, for example, it was anticipated that the capacity to continue the development and application of the technology would emerge within the Benin organizations involved; the "learn by doing" paradigm. This design assumption proved invalid in its application, however, as - at least in the eyes of the Benin side of the collaboration - almost all control over the research rested in the hands of the Canadians and thus it was, presumably, to them that the learning accrued.

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[9]Even in these latter cases, however, there can be leaps of connection. This seemed to be the case in the 3-strata forage/Indonesia project where it was assumed the system would be taken up because the biology "worked", but where farmers' own assessments of cost were not adequately included. In this case, too, impacts were limited.

In a similar way, the Philippines land-use project failed to realize its expectations. In this instance, the findings were expected to contribute to the crafting and implementation of government legislation and guidelines toward sustainable resource management, and to the capacity of local people to "explain the relation between their cultural practices in land and forest use ... and sustainable development." (Buendia:21) The project design, however, allowed for only minimal interaction with either user community, this despite the favourable contexts of a research institution located in the affected region, and of a public consultation process in support of the new Indigenous Peoples' Rights Act taking place at the time.

Specifically why, in this case, there was such a weakness in design is to a degree unclear. The team attributed its failure to have an influence on these communities to the "pure research nature of the project" (Ibid:22) -- the aim, presumably, to generate the analysis, but not necessarily to facilitate its use. The factor of institutional inexperience with integrated research suggested elsewhere probably contributed as well. So, too, the characteristic typical of almost all the projects in this set: not to take users into account (a factor discussed later). Whatever the range of causes, the conclusion of the case study was that while the knowledge generation objectives to "understand, determine, assess and analyze" were reasonably well met, the broad goal of the project that this knowledge would bring about change was not. The design lacked both the mechanisms and a research culture which might have permitted the necessary reaching out.

Congruence of the kind implied here is not easily achieved; it is not always clear how to achieve it and there are invariably trade-offs to be made among criteria - especially between those of scientific rigor and/or technical efficiency on the one hand, and the inevitably "messier" world of users on the other. The underlying rationale of the Cameroon rural communication project, for example, was that rural poverty and social unrest would begin to be addressed by people taking more control over their lives - including having access to the information which would guide their decisions. The design of the project, at least in the initial stages, somewhat contradicted this position by limiting the range of people involved in developing, managing and using the content and mechanisms of the various communication media. Committees responsible for publication and radio programming did not include peasants, farmers or local journalists. Publication subscriptions were too expensive for the majority of rural poor, and literacy rates were in any case to low for large readership. Radio programmes were broadcast at times when relevant audiences were not free to listen. Better monitoring might have helped identify and redress the inconsistencies, and some revisions were eventually made. In a major way, however, the solutions were not straightforward. Costs had to be met, technical competence and efficiencies did matter; infrastructures were limited.

An example of a somewhat better design with respect to congruence between the means provided and the ends sought was the provincial education/Thailand project. The impact of the project was modest, at best contributory rather than direct, and over the long-term rather than immediate. Nonetheless, the design worked insofar as it allowed for incremental training and situation-based data collection and analysis, and built on existing planning systems to pilot the development of provincial data bases. The resulting integrated planning model reflected, therefore, a solid (if limited) assessment of "best practice" which could be fed into a subsequent World Bank project. According to one participant, impact would have been more immediate had the model been applied to an actual planning task (reinforcement of learning to meet felt-need is a core component of sustaining this kind of attitudinal and behavioural change). That this did happen later, by coincidence, is evidence

perhaps both of the importance of recognizing lag-time and readiness in the realization of impact and of the value of basing the activities of the research within the application context of eventual users: outcomes were there when the people and the context were ready.

In this respect, two projects with similar purposes and, in some degree, context -- Cambodia and Lao health training -- provided a somewhat comparative opportunity: very different designs producing consequently quite different outcomes and potential for impacts (this notwithstanding Cambodia's subsequent political troubles). Both projects aimed at creating health research capacity at the system level, through training of staff in analytical procedures focussing on actual health or health-related problems. Both projects were undertaken in a context of weak to non-existent research capacity[10]. Given this environment, both relied on external trainers as partner implementors (Canadian and Thai respectively), and both depended more or less completely on the approaches and capacities of these trainers and the quality of fit between the people and systems involved to realize their goals. The difference in the greater success, and higher potential for impact, in the Cambodian case appears most clearly to have lain in its design: Cambodia, an example of a reasonably sustained learning process, congruent with its context and, overall, consistent with basic HRD principles; Lao PDR, an essentially broken process of sporadic intellectual input, untied to the learning needs or system constraints of the participants and bureaucracy involved.

An important distinction between, and influence on, the two designs was the origin of each: the particular institutional context of IDRC at the time, and the assumptions which informed the training programmes. Critical incidents in limiting the impact of each were the early departures of IDRC as guide and interlocutor (significantly earlier in the Lao case) and, at least partly in consequence, the inability of the project to induce change in the surrounding bureaucratic environments (irrespective of Cambodia's other problems).

For Cambodia, the 3-way collaboration among IDRC (and a programme expected to persist), the Thai training consultant (representing a coherent programme of related training within his own institution) and the Cambodian institution director (bringing both a relevant professional background and strong political connections) appeared to communicate well with respect to expected inputs and outcomes. The result was a well-integrated, coherently delivered, mix of classroom-based theory and monitored field-based research. Care was taken to recruit senior medical staff as trainees, to mitigate lost work time with adequate perdiem and, though not sufficient, to reduce the strain of English as the language of instruction through translated handouts.

In the Lao case, on the other hand, initiative was almost solely from IDRC, pursuing a mixed agenda of two programming areas, both of which were in state of transition and resulting in several turn-overs of increasingly distant POs. The Canadian resource persons, though with unquestioned professional expertise, were selected by IDRC to design training around their own nutrition assessment model, on an integrated problem not especially recognized by the country as critical, and retained on a workshop-by-workshop basis. Participants were expected to apply the learning through further data analyses, effectively without resource input from either the trainers or IDRC. Such a "hands-off" design could have been effective. It assumed, however, a level of officially and/or

[10] albeit stemming from quite different causes, under-development in one case and near-endemic conflict in the other; and with, therefore, quite different core determinants of impact, bureaucratic reform in one; peace in the other.

culturally sanctioned initiative and professional self-confidence which were not, in fact, available. As a result, the intervention constituted, in terms of congruence, a clearly less than appropriate design for this context.

Research Paradigm

Though design was probably the critical negative factor in the Lao case, it was not the only one. Certainly it did not act alone. Monitoring, had it happened to any degree, might have helped recognize and correct initial flaws. But as discussed later, project monitoring appears rarely to perform this reconceptualizing role, and project designs on the whole remain relatively inflexible. Designs also tend to remain as planned because the validity of underlying assumptions go unchallenged, in part because few look for it, and in part because the project mode makes change difficult: to add more budget, to increase duration, to bring in new and/or replace existing researchers are all options not likely to be seen as desirable.

Most significant of all in creating designs which are congruent and flexible vis-a-vis their environments, however, appears to be the research paradigm itself. In the case of 3-strata forage/Indonesia, for example, socio-economic and gender data were eventually collected which could have added critical dimensions to the analysis and enhanced the potential of impact. It was considered to be too late at that point, however, to alter the basic structure of the project -- and the fundamentals of its experimental design: "...the nature of the scientific research design, in its need for consistency, replication and repetition in order to be valid...prevented the incorporation of the new information" (Suhardi:9). There was no suggestion here of minor or narrowly self-serving concerns on the part of a research manager - whether in IDRC or in the field. There are clearly professional risks and institutional costs in having potentially to start from scratch, with possibly even a new set of actors. At best, these risks can be considerable; at worst untenable. The potential for realizing a significant difference in something as vague as "impact" may simply not be compelling enough to warrant them.

What this, and the other cases, suggested is that the design of a project, and the assumptions underlying it, incorporate an *analytical framework of what research is* which subtly affects impact. The research paradigm determines those aspects of reality considered necessary to include and those deemed to be irrelevant. Disciplines tend to determine such decisions a priori; hence the interest in inter-disciplinary approaches which might make a more comprehensive perspective possible. Research perspective, or mindset, appeared as an important factor with respect to outcomes (and from these presumably to impacts) in two senses: projects which failed where they are overly narrow and exclusive; and projects which failed where they attempted interdisciplinarity without the prerequisite capacity.

Projects designed around a *single discipline* appeared to have problems with respect to leaving out critical dimensions of the issue or failing to realize the complexity of the innovation. Within the cropping framework of the 3-strata forage project, for example, "...lack of socio-economic data...perhaps contributed to the designing of a technology that lacked the flexibility of the traditional (system)...and required a commitment ... that farmers were not accustomed to, or willing to, undertake" (Suhardi:8). The cropping technology as such worked; it failed as an applied system to the extent it failed to include dimensions other than the biological within the parameters of its

analysis.

On the other hand, some projects which did attempt to be interdisciplinary (of which there were only a couple in the review) were not always successful at the team-building or collaborative working styles necessary to enable the approach actually to happen. Again, the Philippine land use study provided a good example that the process is not a simple one. Each of the social and natural sciences study teams was allowed "...to operate in a highly decentralized manner....and integration is done through 'brown bag' meetings" (Buendia:10). Unfortunately, the informality of the integrative mechanism appeared to do little more than expose the differences (although, as the case study writer points out, this could have provided the motivational basis for future more effective efforts, and was a venue for getting to know each others' activities). However, while the decentralized structure worked for the social scientists whose sub-studies required collaboration across the groups, it simply served to "reinforce the isolation of the natural scientists.." whose studies could be done alone. The mechanism, not sufficient to enable the degree of innovation required, it seemed, "drove the wedge deeper" (Ibid:10)

Designing the elements of a research activity can be a very subtle business, and the ability of the designers to understand the nature of the task is key. The same action can have quite different implications for outcome and impact in different contexts. One fairly small, but perhaps critical, example of this concerned the issue of payments made to participants, part of the design of both 3-strata forage/Indonesia and health training/Cambodia. In both cases, the rationale seemed sound: to compensate participants for their time, effort and opportunity costs. In Indonesia, however, payment of farmers appears perhaps to have clouded the analysis - and thus assessment of the viability of the technology - "by masking the degree of self-motivated, inherent, interest that farmers might have had in such a design" (Suhardi:8). A main reason given by farmers for not subsequently adopting the 3-strata system was both the direct and opportunity costs involved, costs not calculated into the original mix and which they would have to bear themselves. In Cambodia, on the other hand, perdiem contributed effectively by letting people get on with their learning, without the pressure of their missed (and important) second jobs.

For both projects, the payments were probably a necessary part of project design.[11] In the Cambodian case, however, they appeared to be a sufficient condition. In the Indonesian, they required probably more; i.e. a more precise assessment of, and control over, the role the payments were playing, perhaps by engaging farmers more directly in a fuller socio-economic analysis of the system. Not only might this have made the final analysis more accurate, it could have improved the impact of the TSF system by addressing questions farmers later found to limit its use.

As a final point on research paradigm as a factor, there may also be risks associated with a *magic bullet* approach to research: to the idea that any one piece of analysis can somehow "sew everything up". In fact, for the cases reviewed here, it seems more reasonable to expect even a very well designed and realized project to be simply one more step in a series of decisions and actions which move successively toward a development goal or agenda -- or move away from one. A too-limited research mindset may produce a project design which is overly inflexible, narrow and task-oriented;

[11] Reference was made in interviews with some participants to the fact that no one was paid to cover their work; it simply "didn't get done" in some cases and was, in a small way, a negative impact of the project.

one failing to expose itself adequately to, and engage with, users. It appears from the cases to be important to conceptualize projects as inclusively as possible. The Mexican project succeeded to the extent it was able, not to stand on its own potential impact, but to seek impacts through integration with activities of existing environments: "At times, it was difficult to assess whether certain impacts stemmed purely from the (research organization's) work, or whether the project added another voice to a number of voices... (But) this is actually a real strength of the project. The (research organization) sought to recover and influence, rather than ignore or reject, traditional practices and on-going activities that could contribute to achieving (its) goals." (Wind/Sanchez:19)

In a generally more unplanned and meandering way, influences or impacts of the Thai decentralization project also continue to be felt. From those who have followed the policy over two decades, the project <did not change anything by itself...but it made people (in the departments) think about decentralization and coordination of their work> While the provinces <did not do much planning then, in the sense of the project's intention...informally they did use the data for discussions with other departments...The major output of the project, however, was that the attitudes to decentralization were changed..... you could go back years later - to the pilot provinces - and find the people who participated, and they were strong supporters of decentralized planning....We have more than 15 years of experience experimenting with decentralization, so people are convinced that it is useful> <This is a long process...teachers at the school level became aware of...how important it was to keep accurate records, and they saw that the Ministry was interested in their participation in planning, not just in teaching. This project helped to mobilize them to participate and become involved> (Armstrong-Thailand: interviews)

Goals and Motivation: Nature, Clarity and Agreement

The goals of a project appear from the case studies to be important to its eventual reach and impact along a number of dimensions. Most fundamentally, as with project design, they reveal something of the assumptions being made about the link between the development problem or issue and the way research products/results are expected to resolve or answer it. The more tenuous or abstract this link is, the less clearly articulated are the assumptions, and/or the larger the gap is between the nature of the expected outcomes and capacities of people expected to use them, the more difficult - it seems - that impacts will be realized. In a number of ways, the *nature of project goals* has, in itself, an influence on whether, how and what impacts are realized.

Not surprisingly, projects which aim *solely at knowledge generation*, while they may well produce data and analyses of high quality and validity, do not necessarily induce policy or programme change in the same way that well-executed projects incorporating capacity and/or action goals do, almost by definition. Street vendors/Pune, costs of under-nutrition/Dharwad and land-use /Philippines are good examples of this, the goals of all three expressed in relatively passive and limited terms of data collection, analysis and presentation. None were found to have strong impacts nor to have reached beyond, at best, other academic environments. Consistent with this, projects which dealt with only a fairly abstract issue or situation rather than with a more tangibly definable problem, one for which "people who care" were identified, seemed to realize fewer apparent impacts. In the Pune case, again, "the choice of subject seems to have been based on its topicality and general relevance, rather than on any distinctive features of the sector in Pune." (Bajaj-Pune:3). In fact, the survey data of the project confirmed that the numbers of street vendors was relatively low, that they were not atypically

poor, uneducated or at risk, that their problems with hygiene were similar to most restaurants (all were bad). At the end of the day, then, there was no real audience found who actually seemed to care about the findings, let alone expend the energy to determine and take action.

This is not to imply that only training or action-based projects have impact. Rather, it suggests that impact is more difficult to produce in these cases, requiring more explicit emphasis on making the link; on enabling the transition in perspective from a research paradigm to a user one. It means that even technically "good quality" results must be able to find their relevant audience and present themselves in user-tailored format. As suggested by another factor: this is not something to which researchers or research projects necessarily give high status or do well.

The Mexican project, one of the most successful of the set in realizing multiple reach and impact, also had perhaps the most action-oriented and explicitly user-oriented set of goals, under the overarching aim of "...creating and strengthening local community organization around production and conservation" (Wind/Sanchez:2). In addition to generating data, it sought to involve (the population); initiate and support (applied local research); recover and promote (indigenous knowledge); explore (measures to foster change); establish (processes of training); assess (impact of development projects). In addition, the goals were multifaceted, relating to one another in logical stages - of data collection, analysis/learning and application - and into the varying conditions of the communities' socio-economic and agricultural contexts. It was probably not insignificant either that the project included the community reach process *per se* as a goal, instead of addressing it simply through the methodology. *Multiple, active and inclusive goals*, coupled with appropriately *interactive methods* and a reasonably *open-ended time horizon*, appear to have allowed for equally multiple and broadly-based opportunities and space for reach and use of results throughout, and beyond, the project period.

Having concrete, action-oriented goals alone, however, does not appear to guarantee impact. Any or all of the other factors discussed in this section may intervene against bringing about change. Some of this can be fairly subtle. The participatory extension/Thailand project as a case in point aimed at "formulating and evaluating a participatory approach...as a means of engaging farmers in evaluating and modifying their (own) production technologies". Impacts were in the end limited, however, by differences of opinion among key actors as to exactly what these goals implied in terms of change, and for whom -- a factor discussed in more detail later.

On the other hand, there seemed to be good congruence among principal actors of the health training/Cambodia project. For the Thais, <the objective was just to permit the Cambodians to develop their own capacities; we had no other hidden objective.Their country is going through reconstruction, and they need to build up their self-confidence.That may be more important than any specific skills>; and for the Cambodians, <we did what we wanted....trained core staff who are now skilled in research;...persuaded people to commit themselves in their careers to public health despite the limitations....this is important for the reconstruction of Cambodia>.

The Cambodia project was an instance where goals were clear, and clearly shared. It was, perhaps in consequence, also a project where outputs were considered as being, on the whole, well realized and, at least at the basic level of individual and to some extent institutional advancement, impacts good. *Clarity of goals and their agreement by project implementors*, therefore, appears to have an

important role in ensuring both the quality of the outcomes of the research as well as reach and impact. Ambiguity about what is required, and/or differences in what aspects should be given priority in emphasis, time and resources can dissipate energy, create discord and result in too little attention being given the research-application linkage.

Dissipation of energy was implied in the land-use/Philippines project, in the time spent by staff to define and resolve their lack of clarity around inter-disciplinarity as a research goal. Ambiguity was also a factor in the more outright discord the project suffered, but while this latter did serve perhaps as an air-clearing function, the loss of research energy - and a diminution perhaps of analytical creativity and willingness to engage in innovative outreach activity - seemed a more insidious factor. In the bednets/Benin project, it is unclear what missed opportunities might have resulted from the apparent differences in understanding around goals related to HRD and ownership over the project. Failure to build a perhaps more enduring relationship between the Canadian and Benin institutions and a lingering sense of ill-feeling between the two; breach of collaboration between the two local agencies and a rupture in bednet production; a less-than-optimum development of research skills on the Benin side and no information technology capacity to enable them to link to the region (because the Canadian team apparently thought it within the agreement to remove the computer equipment at the end of the project) appeared to be several of the implications.

As suggested above, that differences in interpretation of goals can lead to too-limited attention to certain dimensions of project process. It was a consequence evident in the participatory extension/Thailand project which seemed to miss almost entirely the critical task of creating sustained institutional human resource development through its particular activity mix. For the project advisor, the principal goal was attitudinal and behaviourial change among the extension officers of the Department, and to start this process at the top: "to ensure that a group of senior officers ..obtains a concrete idea of farmers' capacities to innovate and adapt....and of the extension procedures that can stimulate and integrate this" (Connell: undated memo). Priorities for the project leader, on the other hand, were to create teamwork among the Departments of Agriculture and Extension and the university, and to educate farmers in discussion techniques. The university researcher gave probably least priority to changing the working mindset and style of extension staff, her responsibility and interest to provide an accurate analysis of farmers' decision-making patterns around technology use.

While seemingly not extreme in their differences, the variations in concentration may well have been fundamental to what was done -- or not done -- to reorient staff; to what 'messages' about PR were -- and were not -- conveyed through the daily decisions the project made on what to do and how. In other circumstances, these differences may have complemented or paralleled one another; they need not have been fatal to eventual impact at the department level. Factors are interactive, however, and in this case they constituted a probably critical flaw when coupled with an overall under-estimation of the complexity of the innovation (another factor discussed later) and the generally ingrained inertia of a Thai bureaucracy reluctant to change where this implies a diminution of authority at the centre (a context factor confirmed by the provincial education project).

Motivation presents another way into the issue of goals as a factor of impact, in what it implies both for the quality of the research as such and for the diligence researchers and participants apply to making the project work. Motivation is, perhaps, especially key to ensuring the rigor and persistence

with which project staff seek to engage users in the process, and to move/interpret results in terms of user-oriented practice in ways which will be sustaining. Specific data on this issue were collected from only a couple of the cases; from most, however, they could be inferred. It appears, not surprisingly, that projects considered to have "made a difference" are those in which individuals were motivated by a sense that the activity would directly address a problem they saw as real and important, whether their own or someone else's.

Cambodia again provides a positive example of this. "The reasons for participation in the project appeared for the most part to be what the literature on adoption and implementation of innovations refers to as problem-solving. That is, the participants, both students and trainers, participated in the project, not because they were forced to do so, or primarily because of extraneous financial incentives ...but because the project offered a chance to improve their own personal and professional lives." (Armstrong-Cambodia:13)

The project leader was, in this case, consciously motivated because the initial idea had been his and his institution controlled the agenda, including selection of appropriate participants and the general direction of the training. He subsequently enhanced the likelihood of the project's impact by encouraging staff to apply their skills in other programmes, pursue further training (from other donors) and <provide advice to NGOs...working at the district levels>. This included disseminating the Khmer-language materials developed for the course, and thus extending their reach. The Thai director was similarly motivated by the idea of pursuing his own institutional agenda, to develop a new work-based approach to health research training <...which could then be adapted to the Thai needs>. (Armstrong-Cambodia: interviews) The project also, it appeared, had impact because trainees wanted to be there; <it was meaningful to (them);.. not some academic exercise. It was based in real data that each of them had to work on in their jobs, in immediate problems ....They were all people with professional responsibilities, and they did not want to waste their time. It had an impact because the training was related to real policy issues> (Thai trainer).

All of these fairly self-serving agenda could have translated into problems of conflicting or unfocussed goals (as happened with participatory extension). Here, however, the process factor of good communication perhaps intervened; also that motivation for, and consistency on, goals are not the same thing.

Similarly, in the provincial education/Thailand project, motivation was a factor. For one of the researchers, who then went on to originate similar research under a UNDP grant, <I was young and wanted to learn and try out new ideas about democratization of human resource development ....I came from the Northeast,...which is very poor, and knew that many of the things in the schools there were not relevant to our needs.... So, I wanted to work on something which would help us get local knowledge in the curriculum, to meet local needs. This project was a good opportunity for me.> And in the Mexican project, those community members who became *promotores* did so "... because they themselves were interested in learning....(and) to share their learning for the betterment of their neighbours' livelihoods" (Wind/Sanchez:34)

While perhaps not a factor on a grand scale, and certainly difficult to quantify, it seems logical that the more participants understand and agree upon purpose and have a sense of buying-in, the more care and energy they will bring to it. The issue might also be expressed as there being in the project

a sense of ownership, of participants knowing where it and they were going, able to manage its direction (including the right and responsibility to make changes as needed), and ensuring the usefulness of its results. This was not a factor identified for specific analysis in the case study framework. It was raised most explicitly in the Cambodian review, but was implied in others. Ownership and/or motivation on an individual basis suggests that, at the very least, changes in those individuals will be an outcome -- and perhaps an impact -- of the project experience. On a wider and cumulative scale, the more broadly this happens, it seems reasonable to conclude that there would also be some impact at the institutional level. Whether this results, eventually, in improved impact of the project overall cannot be concluded from the data here. It seems reasonable to conclude, however, that an absence of motivation and ownership within the project would be a limiting factor.

Management

Where a project is poorly managed, it is logical to assume that its outputs may be of insufficient value or quality to warrant both reach and use. So, too, its implementation may be such that those involved learn and development little from them. Or they will learn in a perhaps dysfunctional way, with consequently negative impacts: antagonistic relations within the research institution, or between it and user communities, frustration with research, diminished self-esteem.

Overall, data from the case studies dealt very little with management as a factor of significance to impact, and then primarily with respect to its absence. This was chiefly in the context of personnel turnover and monitoring failure, by IDRC and/or the research institution. The land-use/Philippines project, for example, apparently suffered to some degree from there being "...no single person to manage the project from its inception to its completion" once it had sent its originating research leader on long-term training[12]. *Staff stability* in general as a factor appeared to be able to compensate in part for the gaps, the main issue being whether the project was able to establish continuity of purpose, evolution of common definitions and priorities, development of a shared "culture" in project relationships, decision-making, monitoring. Such appears to have been the case for the rural communications project in the Cameroon where, even though turnover at the top seemed to have limited impact to some degree, the fact that mid-level staff remained constant "...permitted the (organization) to continue the activities after the end of the project" (Assigbley-Cameroon:9),[13] presumably because of the core capacity and experience they had acquired.

Leadership generally appeared to be important in as much as projects need *catalysts, brokers, stock-takers, focal points for collaboration and redirection.* In cases where project activities ran fairly smoothly (irrespective of whether impacts were actually realized), the role of the project leadership was raised only where it seemed out of the ordinary. In the Mexican project, for example, her qualities were key: "...her profound knowledge of the (region), her personal credibility and strength of character... allowed the project to gain an audience in both government and academic circles." (Wind/Sanchez:42) Thereby, to have reach. Leadership here implied more than simply technical or

[12] Happening early on, it was perhaps an example of IDRC working against its own project impact, though presumably the increased capacity gained eventually facilitated the individual realizing impact in her later research.

[13] Both the Cameroon and Benin case studies were written in French. Translations here are by the review authors.

professional expertise in the issues of the research. It suggested the values of being able to understand and be flexible with respect to the broad dynamics and processes of project activities, and to recognize its implications for those expected to engage with it, and ready and able to identify and reach out to them. From the Philippines experience, it requires "balance": providing enough "vision and direction" while at the same time "...not monopolizing all the activities.... (Able to) mobilize individual and institutional support, strengthen linkages and facilitate the dissemination, application and utilization of research output" (Buendia:32/3).

These are characteristics not especially easy to ensure in research, perhaps, where conceptual frameworks and methodologies put a high value on rather different criteria: persistence and rigor of approach, objective distance and certitude about results. They are characteristics nonetheless important to a research enterprise which seeks to create impact, not because they necessarily produce such impact, but because they are more likely to engender the kind of environment which facilitates it. Whether IDRC is able to create such leaders is questionable. The cases would suggest, however, that it can and should, however, seek them out and where they are not available help to fill in the gaps with its own human as well as financial resources.

IDRC can and does perform similar *leadership functions* through its staff, as initial catalysts and, on some occasions, focal points for redirection. Not surprisingly, and at least from these reviews, programme officers are most often associated with the first role. In the Cambodian project, for example, the officer was pivotal initially in identifying what turned out to be an effective partner for the Health director; she then stood back to let them proceed: <"..it was our project...our idea. IDRC provided the money and, when we wanted it, they gave us good advice, but they never interfered> (Armstrong-Cambodia: interviews). In a somewhat similar vein, the 3-strata forage/Indonesia research director "appreciated" the fact that IDRC respected the independence of the research team once things were underway. In costs of under-nutrition/Dharwad, following an initial period of sporadic and, according to the project researchers, largely ineffectual, involvement by IDRC, the assignment of a new and interested officer "...had a determining influence on the quality of the final outputs" (Bajaj-Dharwad:3). Logically, it might be assumed it also had an influence on the extent to which those results were able to have the reach they did into the wider academic and research arena.

In most cases where the issue of IDRC's involvement was raised, however, it was in the context of "had it there been there", things might have gone better: more monitoring and/or fewer staff changes might have avoided specific problems or gaps. Health training/Lao PDR might have had more reach had IDRC been more effectively available to serve as catalyst, doing the inter-ministerial connecting that the culture of the bureaucracy did not allow the researchers to do. And a more activist IDRC involvement might have helped broker the problems of integration in the Philippines' land use project, and of goal misunderstanding in bednets/Benin. In Pune, where "...it would not be too much of an exaggeration to describe the project as an "orphaned project" (Bajaj-Pune:3), more regular monitoring might have urged a search for policy linkages and/or facilitated links to related other experience in IDRC's network.

While constructive in theory, such a role for Centre staff is likely to remain a difficult one to engineer. Development of new projects, disbursing new budgets, have higher priorities than monitoring existing activities. Limited time and travel budgets are spent accordingly. And, as

suggested elsewhere, a project mode based on the funding of a specific research team or institution (whether self or IDRC-selected) and set within the parameters of a given allocation of resources renders any serious re-orientation of existing projects, in general, untenable. It would be especially difficult where the intent was not simply to rescue a research activity which was failing, but rather to enhance the potential of a well-performing one to achieve impact -- something much more abstract and less easily defendable as a reason to travel or to upset established administrative procedures, perhaps.

Project Modality

As the traditional vehicle for delivering ODA funding, the project format is perhaps the most suitable for administrative purposes; it seems one not particularly conducive to realizing impact, however. Most obviously, it forces the development of, and constricts time and resources to, programmes of work and schedules up-front. At the same time, it is rare within this framework to provide either the time or resources for these preparations. IDRC's exploration activities are limited in number and scope, with little encouragement for efforts beyond what is needed to get the core elements of the research design in place. Research environment assessments to identify and engage those who might and should be reached by the exercise and to design appropriate strategies for helping them to do so, are not the norm. And once the project actors, goals and methods, budgets and expected products are set, it appears they are not easily changed -- at least, such were the characteristics of the project set reviewed here.

Among these, only in the Philippines' case was a development stage supported. Unfortunately, while providing six months for focussing the study, the period was not taken as an opportunity either to implicate potential users or for the prospective "integrated team" to learn how to be such. In none of the projects were major changes made to initial structures, design or participants. This is perhaps not surprising, since there appeared to be no major flaws in the technologies of the research as such. It is more surprising if looking for signs of effective reach or impending impacts, and finding few.

Only two cases raised the issue of the project modality *per se* as a factor limiting impact, nutrition-health/Lao PDR and participatory extension/Thailand. In both, the issue was a broad one and closely linked with context: donor projects were considered essentially outside the system. While usually taken seriously by those involved, they were rarely institutionalized, and in the Lao context, usually not a <major policy event>. In the Thai project, <even though it was called participatory action research, and even though research is part of our job description, in fact .... the project advisor and the (university) researcher did the research> (DoAE researcher). Despite his expressed intention to the contrary, the project remained "a project"; its isolation mirroring the Lao:<basically, at the level of the department, the project was treated as a supplement to the traditional system, not as a threat to significantly changing it> (University researcher).

With only two such examples, the idea that the project framework was an impediment to impact is raised, somewhat conjecturally, as a question of to what extent the *administrative boundaries* of projects[14] influence conceptual and methodological ones. To what extent do IDRC and researchers

[14] Limitations of the project mode can and have been mitigated through longer term programmes of support (as in the Southern cone in the 1980s) and through consecutive project phases. It is not clear, however, that either approach

not tend to recognize, actively pursue or seek to rectify weaknesses with respect to issues of reach, use and impact because the typically linear, time-sensitive, pre-planned character of the project pushes against it? It is difficult, at any time, for researchers to challenge assumptions, question established disciplinary concepts, recast objectives and revise or replace methodologies. As suggested elsewhere, it is significantly more difficult to do so when this implies hurdles of administration, approval and design negotiation; in effect, repeating the initial development process, but moving no new money and advancing no programme agenda.

One indication of a possibly dysfunctional project mentality was the sense of there being a *premature closure* to some activities. In the assessment of the Canadians in the bednets/Benin project, IDRC perhaps left the project over-quickly allowing, in consequence, a misunderstanding between the two local partners to emerge and confrontation grow to the possible detriment of long term production and application of the nets. Based less on actual problems created than on opportunities for impact missed, one conclusion of the costs of under-nutrition/Dharwad case study was the need for some form of "stock-taking between recipient and donor in terms of what has been achieved and what should be done". Unfortunately, "...donor interaction with projects [as this one] (typically) ends with the submission of a final report or organization of a final workshop. Mirroring this, recipient efforts, too, converge to this point and then dissipate....(and) follow-up action is thus neglected" (Bajaj-Dharwad:7). Given the often year or more of time usually given to the development of a proposal, the recommendation from the case study of a 6-month "post-project completion" phase seems not at all unreasonable, presuming this focusses around the critical paradigm or perspective "shift" to the users' side.

As suggested elsewhere, the Mexican project was a good - albeit serendipitously so - example of a project which managed to remove the blinkers of fixed time and design by its researchers transforming themselves from a transient team to a permanent organization. In another sense, too, the project was successful at broadening its parameters: by being able to interpret a basically holistic problem framework into much smaller, flexible and locally doable sub-project research activities. It seemed possible, in this way, to combine the strengths of an intersectoral, inter-connected overview with those of reasonably independent, situation-specific fieldwork and analysis. The result was a series of activities which each succeeded in its own terms, small events which improved a single condition incrementally, but which, cumulatively, also added to overall impact. As one sub-project (wildfire control) was described by a *promotora,* impacts seemed to emerge: "Fire doesn't run free any more. Wildfires were stopped and reforestation came in....medicinal plants started to come back. This was an important achievement in terms of health." (Wind/Sanchez:27)

Lag-time is a concept pertinent here, as another way into the matter of project parameters. Not new,

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has particularly focussed on, or led to, substantive changes in attention paid by the Centre to issues of impact. Which is not to say that greater impacts were not realized through either. The fact of being there longer, and in the case of the programme grants, of being there with a purposefully open-ended and relatively flexible agenda, would undoubtedly give more opportunity for people to engage with the activity. Neither of these funding categories was selected for the present review, chiefly due to limits of time and budget which did not allow for the greater amount of data required from the larger numbers of people and longer funding periods. A separate review would seem warranted and could now draw on the present analysis to consider whether significantly broader reach/impacts were realized and/or whether PO and research perspectives on these issues were radically different from the norm.

but introduced into the review during a discussion with an IDRC officer with particular reference to his research on the application of aqua-technologies, lag-time is essentially the idea that innovations need time to "take".[15] Only two[16] of the studies included in the review were a decade past completion, inland fisheries/Nepal and provincial planning/Thailand. It was, therefore, difficult to confirm from the data whether some sort of a lag-time is true generally of projects in order to realize impact. Certainly, it seems logical that allowing a period of time to elapse before looking for it would enable a fairer assessment of whether impact happens or not. It suggests that IDRC might need to give some consideration to more "10-years post termination" evaluations if it wants to assess its own success as a results-based institution.

That said, presumably, something is happening to an innovation during the "lag" of lag-time -- if, indeed, it has an impact. Somehow and somewhere the knowledge, idea or technology is being maintained, adapted, integrated or pushed. In the case of the Thai decentralized planning, for example, they "...keep working on these projects, like the IDRC's...so that people will have the skills and attitudes to make their work more effective if the politicians make the decision for decentralization" (Armstrong-Thailand: interviews). In the case of the fisheries project in Nepal, of probably most significance was the development of strong human resource research capacity and, as noted elsewhere under the issue of building intermediary institutions, of maintaining that capacity within the government's research, development and policy system. It is a situation which enabled the Fisheries Department to continue on its own the lines of research begun under the project, to follow-up the evolution of innovations with user fisher communities, to collaborate with related activities elsewhere in the country and the region, and to draw in other donor funding.

The important point about lag-time, then, is not simply whether research results take a while to germinate. Presumably in most cases they do, especially those of complex social or policy change. The critical questions are what can be done in the research process itself, and/or consequent to it, to help foster or enable that germination; and what is the appropriate paradigm for working out the answer? Common to both the Thai and Nepal projects, for example, was a design factor: the emphasis on training of those staff immediately implicated in the issue, in the context of the work they were doing, on a topic relevant to long-term policy priorities of the countries concerned and using (it appears) sound pedagogical and/or educational methods. Also common was the context factor: the presence of an enabling environment of other agencies, donor and domestic, all contributing to keeping the issues of the research in reasonably high relief. IDRC's continuing role in the both cases was indirect, but perhaps influential. Linkages continued with both partners in the Thai case, and thematically related research (action research in microplanning, for example) was supported in other MoE departments. In Nepal, while IDRC played a quickly diminishing role in the decade following the project, the Department's persistence, including in particular the involvement of the staff trained under the project, maintained the general R&D lines begun in the project.

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[15] In the case of his fisheries research, often a decade or more between creation in the lab and general use in the field.

[16] While 3-strata forage started in the early '80s, a second phase brought it to 1992.

Data from a nonformal education project funded by IDRC in Lao PDR[17] provided a nice example of the fact, and some factors, of progress through lag-time. Limpingly completed in 1995 as one of the Centre's "orphans", the project was at this point assessed as, in most technical senses, a failure. As an instance of the importance of "potential" impact realized through the individual, however, the former Director reported that, in fact, he had now had time to <integrate> the ideas of the project into the system, <by looking for the positive ways it might fit and then targeting the people in the bureaucracy who might support, or have problems, with it>. In contrast to the health-nutrition/Lao project, the barriers against crossing sector lines did not seem to him insurmountable, perhaps a function of the strong capacity focus of the project, which included a linkage with highly able policy-makers and researchers from Thailand's DNFE who had been through much the same intra-bureaucracy battles.

That said, now retired and working as advisor to the MoE, he had <more energy and freedom> to pursue the goal, an example perhaps of the durability of some intangible impacts. Finally, as a further example of the incremental, but cumulative, nature of impacts, four neighbouring villages which had watched the progress of the project had subsequently taken up its ideas, <with the help of the provincial education people who visited and gave advice using funds provided by the Department, and with the support of the Minister and Vice-minister who visited former project villages>. Thus, while there was <no evidence yet that the project ideas were moving to other provinces, the documents of the project were available to senior officers and they had seen the practice> -- a sign perhaps of more lag-time potential.

The issue of hiatus between the end of a project and its impact has importance for pragmatic reasons. Though this was raised as a methodological dilemma in only one case, it has pertinence to all: how to trace the lines of reach and impact from an IDRC project as something distinct from those of other projects, or of changing policy environments in general: "...to determine whether the potential impacts of the IDRC project could be disaggregated from the cumulative impacts of ... other projects also dealing in substantive ways with the decentralization of education" (Armstrong -Thailand:3). It is an issue not just related to a donor's measurement of results realized, of course. Nor is it an issue solely of post-project trajectories. With respect to the first, even more than the donor, the recipient system itself should be able to track where an innovation in policy or practice has gone or is going, to assess its value; to know whether and where to intervene further. On the second, it is likely that a mindset which understands the research process as a linear, one-result, end of the pipe exercise, will undermine reach and impact from the outset. In this, it is an issue worth further exploration, perhaps.

Project *duration* is an element of design, but it is put here because it seemed perhaps more intriguingly a dimension of the project modality. Though apparently not in itself a critical factor in determining success of a project or its eventual impact, it can well be a factor in impeding both where the time allowed is insufficient for the goals sought or for the complexity of the innovation. It can also impede where there is not sufficient opportunity for sustaining the activities needed to reach prospective users, to allow for application, or to adapt and "anchor" outputs in various user contexts.

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[17]"Post-Literacy for Quality of Life Improvement" (1991-95). Not part of the formal case studies, information was gathered in an interview with the team leader and former Director of the recipient department in the MoE.

It is in this context that duration also links with the project mechanism: to what extent does the length of a project and, within that, the scheduling of activities, follow the dictates of the design or the more administrative imperatives of an acceptable and traditional project length? None of the cases specifically raised the issue; it is nonetheless curious that all but Nepal, despite very different contexts and purposes, fell within a normal limit of about three years (excluding multiple phases).

Duration of a project is not the same as *follow-up phases* to that project. The latter implies the possibility of changing course, focus, task and/or actors with the purpose of moving the research activity beyond its current framework: to broaden a too-narrow initial design; to incorporate new actors, particularly users; to shift the paradigm/perspective completely, from research producer to that of output user. Where the follow-on phase is simply a continuation of the first, to allow more time do more of the same or do it on a wider scale, there seems unlikely to be influence on increased impact (except to increase potential insofar as the product may be of higher quality). Unfortunately, there was not enough evidence from this set of projects to make a judgement.